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ABSTRACT

This publication summarizes results of the Bureau of Labor Statistics' 18th annual salary survey of selected professional, administrative, technical, and clerical occupations in private industry as of March 1977. The survey provides nationwide salary averages (not including Alaska and Hawaii) and distributions for 78 work-level categories covering 19 occupations in the following industries: mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and selected services. Minimum size of the establishments surveyed was either 100 or 250 employees, depending on the industry. In addition to nationwide statistics, average salary data are also presented separately for metropolitan areas. The appendix contains a discussion of the survey's methodology, occupational definitions for each of the survey categories, and tables that compare average salaries in private industry with corresponding salary rates for federal employees. (Author/JG)

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National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1977

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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U.S. Department of Labor
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Preface

This bulletin summarizes the results of the Bureau's annual salary survey of selected professional, administrative, technical, and clerical occupations in private industry. The nationwide salary information, relating to March 1977, is representative of establishments in a broad spectrum of industries throughout the United States, except Alaska and Hawaii.

The results of this survey are used for a number of purposes, including general economic analysis and wage and salary administration by private and public employers. One important use is to provide the basis for setting Federal white-collar salaries under the provisions of the Federal Pay Comparability Act of 1970. Under this act, the President has designated the Secretary of Labor, the Director of the Office of Management and Budget, and the Chairman of the U.S. Civil Service Commission, to serve jointly as his agent for the purpose of setting pay for Federal white-collar employees. The agent is responsible for translating the survey findings into recommendations to the President as to the appropriate adjustments needed in Federal pay rates to make them comparable with private enterprise pay rates for the same levels of work. The President's agent also determines the industrial, geographic, establishment-size, and occupational coverage of the survey. The role of the Bureau of Labor Statistics in the pay-setting process is limited to conducting the survey and advising on the feasibility of proposed survey changes. It should be emphasized that this survey, like any other salary survey, does not provide mechanical answers to pay policy questions.

The occupations studied span a wide range of duties and responsibilities. The occupations selected were judged to be (a) surveyable in industry within the framework of a broad survey design, (b) representative of occupational groups which are numerically important in industry as well as in the Federal service, and (c) essentially of the same nature in both the Federal and private sectors.

Occupational definitions used in the collection of the salary data (appendix C) reflect duties and responsibilities in private industry; however, they are also designed to be translatable to specific General Schedule grades applying to Federal employees. Thus, the definitions of some occupations and work levels were limited to specific elements that could be classified uniformly among establishments. The Bureau of Labor Statistics and the Civil Service Commission collaborated in the preparation of the definitions.

At the request of the President's agent, the industrial and establishment-size coverage of the survey was expanded in 1977. This expansion was made to broaden the survey's representativeness of private industry. Changes in survey scope are discussed in appendix B.

The survey could not have been conducted without the cooperation of the many firms whose salary data provide the basis for the statistical information presented in this bulletin. The Bureau, on its own behalf and on behalf of the other Federal agencies that collaborated in planning the survey, wishes to express appreciation for the cooperation it has received.

This study was conducted in the Bureau's Office of Wages and Industrial Relations by the Division of Occupational Wage Structures. The analysis in this bulletin was prepared by Philip M. Doyle and Felice Porter. Field work for the survey was directed by the Bureau's Assistant Regional Commissioners for Operations.

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Professional, Administrative, Technical, and Clerical Pay, March 1977

Summary

Average salaries of workers in the occupations covered by this survey rose 6.9 percent from March 1976 to March 1977, the third largest annual increase recorded since the survey was begun in 1960. Increases for 8 of the 12 professional, administrative, and technical support occupations surveyed ranged from 6.0 to 7.8 percent; the average increase was 7.1 percent. The average of the increases for the clerical occupations surveyed was 6.6 percent; the increases ranged from 5.5 to 7.9 percent.[1]

Average monthly salaries for the 78 occupational levels varied from $506 for clerks engaged in routine filing to $3,876 for the highest level in the attorney series. For most of the occupations, salary levels in metropolitan areas and in large establishments were higher than the average for all establishments within the full scope of the survey. Salary levels in finance and retail trade industries generally were lower than in other major industry divisions represented in the survey. Reported average standard weekly hours also were generally lower in the finance industries.

Characteristics of the survey

This survey, the 18th in an annual series, provides nationwide salary averages and distributions for 78 work level categories covering 19 occupations. It relates to establishments in all areas of the United States, except Alaska and Hawaii, in the following industries: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and selected services. The minimum size of the establishments surveyed is either 100 or 250 employees depending on the industry.[2]

Occupational definitions in this study permit employees to be classified by duties and responsibilities into appropriate work levels—designated by Roman numerals, with level I as the lowest. Specific job factors determining classification, however, vary from occupation to occupation.

The number of work levels in each occupation ranges from one for messengers to eight each for chemists and engineers. Most occupations have more than one work level; some occupations are purposely defined, however, to cover specific bands of levels which are not intended to represent all workers in those occupations.

The survey is designed to permit separate presentation of data for metropolitan areas. These include the 276 Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through October 1975 by the U.S. Office of Management and Budget. Establishments in metropolitan areas employed over four-fifths of all the workers and nine-tenths of the professional, administrative, clerical, and supervisory employees within the scope of the survey. Ninety percent of the employees in the occupations chosen for study were employed in metropolitan areas.

Selected occupations included more than 1,661,000 employees, or almost one-fifth of the estimated employment in professional, administrative, clerical, and related occupations in establishments within the scope of the survey. Employment in the occupations varied widely, reflecting not only actual differences among occupations, but also differences in the range of duties and responsibilities covered by the occupational definitions. Among professional and administrative occupations, the eight levels of engineers included 424,885 employees, whereas each of three other occupational categories (chief accountants, job analysts, and directors of personnel) included fewer than 5,000 employees. Accounting clerks and secretaries made up over one-half of the 796,216 employees in the clerical occupations studied. Selected drafting occupations had aggregate employment of 83,216; five engineering technician levels together had 90,018; and the six computer operator levels, 60,449.

Although approximately one-half of all employees in the occupations studied were women, they were concentrated in clerical positions. Women filled more than 90 percent of the jobs at each level of keypunch operators, secretaries, stenographers, and typists. A percent distribution of women employees by occupation and level is shown in appendix A.

Changes in salary levels

Text table 1 presents increases in average salaries that occurred between annual survey periods since 1961 for

[1] Results of the March 1976 survey were presented in *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1976*, Bulletin 1931 (Bureau of Labor Statistics, 1976).

[2] For a full description of the scope of the 1977 survey, see appendix A.

Text table 1. Percent increases in average salaries, 1961-77, by occupation and group

Occupation and group	1961 to 1962	1962 to 1963	1963 to 1964	1964 to 1965	1965 to 1966	1966 to 1967[1]	1967 to 1968	1968 to 1969	1969 to 1970	1970 to 1971	1971 to 1972[1]	1972 to 1973	1973 to 1974	1974 to 1975	1975 to 1976	1976 to 1977	Average annual rate of increase, 1961 to 1977
All survey occupations[2]	2.9	3.0	3.1	3.1	3.3	4.5	5.4	5.7	6.2	6.6	5.8	5.4	6.4	9.0	7.0	6.9	5.3
Professional, administrative, and technical support[3]	3.0	3.3	3.4	3.7	3.6	4.2	5.5	5.8	6.2	6.7	5.5	5.4	6.3	8.3	6.7	7.1	5.3
Accountants	2.8	3.3	2.8	3.5	3.8	4.6	5.7	7.0	6.7	6.7	5.6	4.9	6.1	9.8	6.4	7.8	5.5
Auditors	2.9	3.6	3.1	3.9	3.8	4.8	5.5	7.2	7.0	7.0	5.5	5.2	6.2	6.5	5.5	6.8	5.2
Chief accountants	2.6	2.8	4.8	3.9	3.3	5.1	5.5	5.8	7.1	9.1	3.9	5.8	7.2	8.6	6.6	10.5	5.8
Attorneys	3.2	4.6	3.3	4.2	4.0	3.2	5.3	(4)	7.1	5.0	6.1	6.3	5.8	7.6	6.1	5.4	(4)
Buyers	(5)	(5)	(5)	(5)	(5)	4.2	4.9	6.6	6.1	7.0	6.3	5.0	6.0	9.2	6.7	7.0	(4)
Job analysts	1.4	2.6	3.5	4.3	5.4	3.4	7.0	2.1	4.1	7.7	6.8	5.2	6.1	7.5	6.0	6.5	5.0
Directors of personnel	3.7	3.0	4.6	3.5	3.6	3.8	5.4	5.4	7.4	8.0	3.9	7.5	7.2	6.1	7.8	9.1	5.6
Chemists	3.9	3.8	3.3	3.9	4.8	4.4	5.1	6.5	5.9	5.5	5.1	3.7	7.1	10.1	6.6	7.0	5.4
Engineers	2.6	4.4	2.9	3.2	3.7	4.3	5.4	6.2	5.5	5.7	5.2	5.1	5.4	8.4	6.8	6.4	5.1
Engineering technicians	(5)	2.9	3.6	2.3	2.8	3.7	5.1	5.8	6.3	6.5	5.1	4.7	6.0	9.0	8.1	7.2	[6]5.3
Drafters[7]	3.2	3.6	2.6	(5)	1.5	3.5	5.3	5.8	4.9	5.6	7.2	6.2	6.7	8.0	7.4	8.0	(4)
Computer operators	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	5.4	(4)
Clerical[2]	2.8	2.6	2.7	2.4	3.0	4.8	5.3	5.5	6.2	6.5	6.1	5.4	6.4	5.8	7.3	6.6	5.2
Accounting clerks	3.0	2.5	2.8	2.2	3.0	3.3	4.7	4.7	6.2	6.0	6.0	4.6	6.9	7.7	7.2	6.9	4.8
File clerks	(5)	2.6	3.1	2.2	2.9	5.1	6.8	5.5	5.5	6.1	5.5	5.9	5.4	9.6	6.4	5.5	[6]5.2
Keypunch operators	(5)	2.5	2.7	2.3	3.7	5.2	4.9	5.3	6.4	7.0	6.8	5.4	7.3	9.9	7.8	5.9	[6]5.5
Messengers	2.6	2.8	2.3	3.0	2.8	5.4	6.2	6.7	6.3	6.7	6.3	5.1	5.6	10.1	7.4	7.5	5.4
Secretaries	(5)	(5)	(5)	(5)	(5)	(5)	4.6	5.3	6.4	6.6	6.1	5.1	(5)	(5)	(5)	6.4	(5)
Stenographers	(5)	2.5	2.4	2.3	2.9	4.8	4.9	5.9	5.8	7.5	6.4	5.2	6.5	11.6	8.0	7.9	[6]5.6
Typists	2.5	2.6	2.6	2.5	2.6	5.4	5.8	5.7	6.0	6.1	5.7	4.0	6.7	9.9	7.1	6.2	5.1

[1] Survey data did not represent a 12-month period due to a change in survey timing. Data have been prorated to represent a 12-month interval.

[2] Data for 1 administrative occupation (managers of office services, last surveyed in 1968), 1 clerical supervisory occupation (keypunch supervisors, surveyed from 1970 to 1976), and 3 clerical occupations (bookkeeping-machine operators, last surveyed in 1964, and switchboard operators and tabulating-machine operators, last surveyed in 1970), not shown above, are included in the all-survey and the broad occupational group averages for the periods during which they were surveyed.

[3] Comparable data not available for both years.

[4] Comparison over this period was not possible because of changes in the definition of the occupation.

[5] Not surveyed.

[6] Average annual rate of increase from 1962 to 1977.

[7] Includes drafter-tracers.

NOTE: For method of computation, see appendix A.

each survey occupation.[3] Also shown are average percent changes for the two broad occupational groups covered by the survey (the professional, administrative, and technical support group; and the clerical group) and the average percent change for the two groups combined.

The 6.9-percent increase in white-collar salaries in the year ending March 1977 was the third largest recorded since the series was begun. It was exceeded only by the increases shown by the two previous surveys. Clerical salaries were up 6.6 percent; salaries of the professional, administrative, and technical support occupations were up 7.1 percent. For the first time in 6 years, the rate of increase for professional, administrative, and technical support jobs exceeded the rate of increase for clerical jobs.

Among the 19 occupations surveyed, the smallest increases were for attorneys and computer operators, at 5.4 percent, and file clerks, at 5.5 percent. Showing the largest increases were chief accountants, at 10.5 percent, and directors of personnel, at 9.1 percent.

To show changes in salaries since 1961 for different levels of work, occupational classifications were grouped into the three broad categories described in text table 2.

[3] Beginning in 1965, data are for establishments in metropolitan areas and nonmetropolitan counties; before 1965, data are for metropolitan areas only. Establishments employing fewer than 250 workers were excluded before 1966.

Text table 2. **Percent increases in average salaries, 1961-77, by work level category**

Work level category	1961 to 1962	1962 to 1963	1963 to 1964	1964 to 1965	1965 to 1966	1966 to 1967[1]	1967 to 1968	1968 to 1969	1969 to 1970	1970 to 1971	1971 to 1972[1]	1972 to 1973	1973 to 1974	1974 to 1975	1975 to 1976	1976 to 1977	1961 to 1977
Group A (GS grades 1-4 in appendix D)	2.8	2.7	2.7	2.2	2.9	4.5	5.1	5.5	6.2	6.2	6.3	5.5	6.2	9.1	7.8	6.9	122.7
Group B (GS grades 5-10 in appendix D)	2.6	4.0	2.6	3.3	3.7	4.8	5.8	6.5	6.3	6.3	5.2	4.4	5.7	8.6	6.4	6.3	123.1
Group C (GS grades 11-15 in appendix D)	3.5	3.7	3.5	4.2	4.2	4.1	4.7	5.9	6.4	6.2	5.6	5.7	6.2	8.8	6.5	7.7	132.7

[1] Actual survey-to-survey increases have been prorated to a 12-month period.

NOTE: For method of computation, see appendix A.

Average salaries increased more for the higher occupational levels (group C) than for the two lower groups from 1961 through 1966, except for the 1962-63 period. Between 1966 and 1969, however, the middle occupational levels (group B) showed larger annual increases than did the lower or higher levels. Between 1969 and 1971, the increases for all three groups were nearly identical, but since 1971, the middle group has trailed the other two. Although occupational levels in group C show the largest cumulative increase over the entire 1961-77 period, salaries of occupational levels in group A have increased the most (49.5 percent) between 1971 and 1977.

Another method of examining salary trends is to combine the data into the four occupational groups shown in chart 1. Increases from 1976 to 1977 amounted to 7.6 percent for the experienced professional and administrative group; 5.1 percent for the entry and developmental professional and administrative group; 6.3 percent for the technical support group; and 6.8 percent for the clerical group.[4] The entry and developmental professional and administrative group continued the pattern shown since 1970 of recording the smallest percent change.

Increases in salaries for the entry and developmental professional and administrative group averaged 5.0 percent over the 16-year period—less than the increases for the technical support group, 5.1 percent; the clerical group, 5.2 percent; and the experienced professional and administrative group, 5.4 percent.[5]

[4] Work levels used to compute 1976-77 increases were: Clerical—All clerical levels. Technical support—All levels of drafters, engineering technicians, and computer operators. Entry and developmental professional and administrative—Accountants I and II; auditors I and II; attorneys I; job analysts II; chemists I and II; and engineers I and II. Experienced professional and administrative—Accountants III, IV, and V; auditors III and IV; chief accountants I, II, III, and IV; attorneys II, III, IV, V, and VI; job analysts III and IV; directors of personnel I, II, III, and IV; chemists III, IV, V, VI, VII, and VIII; and engineers III, IV, V, VI, VII, and VIII.

A few survey levels, not readily identifiable with any of the 4 occupational categories, were not used.

[5] Survey data for 1966-67 and 1971-72 did not represent a 12-month period due to changes in survey timing. Increases for these years have been prorated to represent a 12-month period.

Average salaries, March 1977

Average monthly salaries for the occupations studied (table 1) ranged from $506 for file clerks I to $3,876 for the top level of attorneys surveyed. These extremes reflect the wide range of duties and responsibilities represented by the work levels surveyed. Average salaries for workers in the various occupational levels and a brief indication of the duties and responsibilities these levels represent are summarized in the following paragraphs.[6]

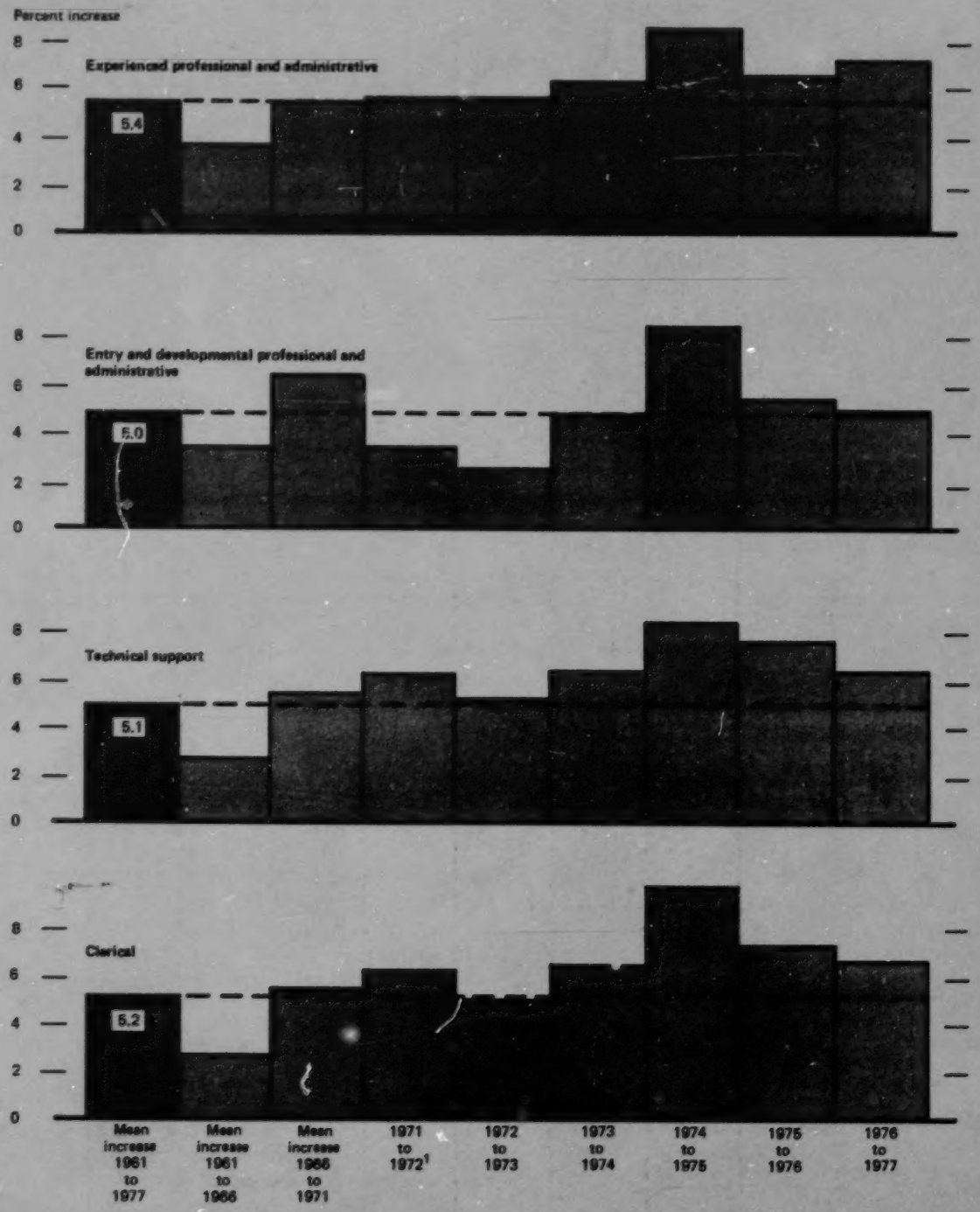
Among the five levels of *accountants* surveyed, average monthly salaries ranged from $1,013 for accountants I to $2,087 for accountants V. *Auditors* in the four levels defined for survey had average salaries ranging from $1,047 a month for auditors I to $1,794 for auditors IV. Level I in both the accounting and auditing series included trainees who had bachelor's degrees in accounting or the equivalent in education and experience combined. For level III, the most heavily populated group in both series, monthly salaries averaged $1,379 for accountants and $1,426 for auditors. Sixty-four percent of the accountants and 39 percent of the auditors were employed in manufacturing industries. Large numbers of auditors also were employed in the finance, insurance, and real estate industries (32 percent); and in public utilities (16 percent).[7]

Chief accountants—surveyed separately from accountants—include those who develop or adapt and direct the accounting program for a company or an establishment (plant) of a company. Classification levels are determined by the extent of delegated authority and responsibility, the technical complexity of the accounting system, and, to a lesser degree, the size of the professional staff directed. Chief accountants at level I, who have authority to adapt the accounting system established at higher levels to meet the needs of an establishment with relatively few and stable functions and work processes (directing one or two accoun-

[6] Classification of employees in the occupations and work levels surveyed is based on factors detailed in the definitions in appendix C.

[7] Establishments primarily engaged in providing accounting and auditing services are excluded from the survey.

Chart 1. Increases in average salaries for selected occupational groups, 1961 to 1977



[1] Data were adjusted to a 12-month period.

tants), averaged $1,880 a month. Chief accountants IV,[8] who have authority to establish and maintain the accounting program, subject to general policy guidelines, for a company with numerous and varied functions and work processes (directing as many as 40 accountants), averaged $3,066 a month. Over two-thirds of the chief accountants who met the requirements of the definitions for these four levels were employed in manufacturing industries.

Attorneys are classified into survey levels based upon the difficulty of their assignments and their responsibilities. Attorneys I, which include new law graduates with bar membership and those performing work that is relatively uncomplicated due to clearly applicable precedents and well-established facts, averaged $1,336 a month. Attorneys in the top level surveyed, level VI, averaged $3,876 a month. These attorneys deal with legal matters of major importance to their organization, and are usually subordinate only to the general counsel or an immediate deputy in very large firms. Finance, insurance, and real estate industries employed over four-tenths of the attorneys; manufacturing industries employed about three-tenths; and public utilities, two-tenths.[9]

Buyers averaged $1,029 a month at level I, which includes those who purchase "off-the-shelf" and readily available items and services from local sources. Buyers IV, who purchase large amounts of highly complex and technical items, materials, or services, averaged $1,826 a month. Manufacturing industries employed 83 percent of the buyers in the four levels.

In the personnel management field, four work levels of *job analysts* and five levels of *directors of personnel* were studied.[10] Job analysts II, the lowest level for which data could be presented, averaged $1,131 compared with $1,742 for job analysts IV who, under general supervision, analyze and evaluate a variety of the more difficult jobs and may participate in the development and installation of evaluation or compensation systems. Directors of personnel are limited by definition to those who have programs that include, at a minimum, responsibility for administering a job evaluation system, employment and placement functions, and employee relations and services functions. Those with significant responsibility for actual contract negotiation with labor unions as the principal company representative are excluded. Provisions are made in the definition for weighting various combinations of duties and responsibilities to determine the level. Among personnel directors, average monthly salaries ranged from $1,588 for level I to $3,149 for level IV.[11] Manufacturing industries employed 65 percent of the job analysts and 70 percent of the directors of personnel included in the study; the finance, insurance, and real estate industries ranked next with 21 percent of the job analysts and 10 percent of the directors of personnel.

Chemists and *engineers* each are surveyed in eight levels. Both series start with a professional trainee level, typically requiring a B.S. degree. The highest level surveyed involves either full responsibility over a very broad and highly complex and diversified engineering or chemical program, with several subordinates each directing large and important segments of the program; or individual research and consultation in difficult problem areas where the chemist or engineer is a recognized authority and where solutions would represent a major scientific or technological advance.[12] Average monthly salaries ranged from $1,073 for chemists I to $3,720 for chemists VIII, and from $1,218 for engineers I to $3,172 for engineers VIII. Although at level I the average salaries of engineers exceeded those of chemists by 14 percent, the salary advantage of engineers over chemists decreased steadily with each level, until at level IV the average salaries for both occupations were nearly equal, and at level VIII the average salaries for chemists exceeded those for engineers by 17 percent.

Level IV represents the largest group in each series; it includes professional employees who are fully competent in all technical aspects of their assignments, work with considerable independence, and in some cases, supervise a few professional and technical workers. Manufacturing industries accounted for over 86 percent of all chemists and 69 percent of all engineers; the selected services, 7 and 13 percent; and public utilities, 1 and 12 percent, respectively.

By definition, the five-level series for *engineering technicians* is limited to employees providing semiprofessional technical support to engineers engaged in areas such as research, design, development, testing, or manufacturing process improvement, and whose work pertains to electrical, electronic, or mechanical components or equipment. Technicians engaged primarily in production or maintenance work are excluded. Engineering technicians I, who perform simple routine tasks under close supervision, or from detailed procedures, averaged $811 a month. Engineering technicians V, the highest level surveyed, averaged $1,436 a month. That level includes fully experienced technicians performing more complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope, or a portion of a larger and more diverse project in accordance with objectives, requirements, and design approaches as outlined by the supervisor or a professional engineer. Salaries for intermediate levels III and IV, at which a majority of the technicians surveyed are classified, averaged $1,096 and $1,268, respectively. As might be expected, most of the technicians as defined were

[8] Although chief accountants V, directors of personnel V, and job analysts I were surveyed, as defined in appendix C, too few employees in each occupational level met requirements for the level to warrant presentation of salary figures.

[9] The survey excludes establishments primarily offering legal advice or legal services.

[10] See footnote 8.

[11] See footnote 8.

[12] It is recognized in the definition that top positions of some companies with unusually extensive and complex engineering or chemical programs are above that level.

employed in manufacturing (77 percent) and in the selected services studied (14 percent), with public utilities employing nearly all the rest (7 percent). Although the ratio of such technicians to engineers studied was about 1 to 4 in all manufacturing industries, a ratio of approximately 1 to 3 was found in establishments manufacturing mechanical and electrical equipment, 1 to 8 in public utilities, and 1 to 3 in research, development, and testing laboratories.

In the *drafting field*, the definitions used in the survey cover four levels of work—drafter-tracers, and drafters I, II, and III. Monthly salaries averaged $768 for drafter-tracers and ranged from $863 to $1,319 among the three levels of drafters. Drafter-tracers copy plans and drawings prepared by others or prepare simple or repetitive drawings of easily visualized items. The three drafter levels, as defined, range from employees preparing detailed drawings of single units or parts (level I) to those who, working in close support with the design originator, plan the graphic presentation of complex items having distinctive design features, and either prepare or direct the preparation of the drawings (level III). The drafting employees were distributed by industry in about the same proportion as engineers, with 64 percent in manufacturing, 11 percent in public utilities, and 15 percent in the selected services studied.

Computer operators, surveyed in six levels, are classified on the basis of responsibility for solving problems and equipment malfunctions, the degree of variability of their assignments, and the relative level of sophistication of the equipment they operate. Computer operators I whose work assignments consist of on-the-job training averaged $665 a month. Computer operators III, the largest group surveyed, averaged $877. At the highest level, computer operator VI, the average monthly salary was $1,369; less than 2 percent of the operators, however, were at this level. Computer operators and keypunch operators were distributed by industry in approximately similar proportions. Nearly two-thirds were employed in the manufacturing and the finance, insurance, and real estate industries; one-tenth were employed in both public utilities and selected services.

Among the survey's seven *clerical jobs*, secretary was the most heavily populated. Average monthly salaries for secretaries ranged from $777 at level I to $1,117 at level V. Average salaries of $757 and $848 were reported for general and senior stenographers; $678 and $866 for accounting clerks I and II; and $600 and $715 for the two levels of typists. Generally, average salaries for clerical workers were highest in the public utilities, manufacturing, and mining industries and lowest in the finance, insurance, and real estate, and retail trade divisions. In 12 of the 17 clerical work levels, employment in manufacturing exceeded that in any of the nonmanufacturing divisions within the scope of the survey; highest employment totals in the other five levels were in the finance, insurance, and real estate division. Women constituted 95 percent or more of the employees in 11 of the clerical work levels; men constituted more than one-half in only one (messenger).

Median monthly salaries (the amount below and above which 50 percent of the employees are found) for most work levels were slightly lower than the weighted averages (means) cited above (i.e., salaries in the upper halves of the arrays affected averages more than salaries in the lower halves). The relative difference between the mean and the median was less than 3 percent for 50 of the 78 work levels, from 3 to 5 percent in 18 work levels, and from 5 to 7 percent in the other 10 levels.

Salary levels in metropolitan areas

In most occupational levels, average salaries for employees in metropolitan areas (table 2) were slightly higher than average salaries for employees in all establishments within the full scope of the survey (table 1). Only in 2 of the 78 work levels for which separate data could be presented were average salaries more than 1.5 percent higher in metropolitan areas than in all areas combined. Employment in the survey occupations in metropolitan areas was about nine-tenths of the total nationwide employment reported in these occupations. The proportions varied, however, among occupations and work levels. Nearly all attorneys, for example, but less than four-fifths of the directors of personnel, were employed in metropolitan areas. In 68 of the 78 work levels, 85 percent or more of the employment was in metropolitan areas. It is apparent, therefore, that for most work levels, salaries in nonmetropolitan counties could have little effect upon the averages for all establishments combined.

Salary levels in large establishments

Table 3 presents separate data for 75 occupational work levels in large establishments—those with 2,500 employees or more. Included are the proportions of employees working in large establishments and their salary levels relative to the full survey averages.

Large establishments accounted for 36 percent of all employees in the 75 occupational levels—ranging from 5 percent for directors of personnel II to 71 percent for the highest level of engineering technicians studied. The proportion was near one-third for most professional, administrative, and technical support occupations although for the numerically important engineer and engineering technician occupations the proportions were 52 and 51 percent, respectively. The proportion was 27 percent for employees in the clerical occupations.

Salary levels in large establishments expressed as percents of levels in all establishments, combined, ranged from 99 to 134 and averaged 109 for the 75 occupational levels. Salary levels in large establishments exceeded all-establishment averages by 5 percent or more in all but one of the clerical levels, but in only 35 of 58 nonclerical levels, as shown by the tabulation on the next page (all-establishment average for each occupational level = 100 percent).

	Professional, administrative, and technical	*Clerical*
Total number of levels	58	17
95–99 percent	1	–
100–104 percent	22	1
105–109 percent	17	2
110–114 percent	11	9
115 percent and over	7	5

As expected, the pay relatives were close to 100 for those work levels where large establishments contributed heavily to the total employment and, consequently, to the all-establishment average.

Salary distributions

Percent distributions of employees by monthly salary are presented for the professional and administrative occupations in table 4, for technical support occupations in table 5, and for the clerical occupations in table 6. Within all 78 work levels, salary rates for the highest paid employees were more than twice those of the lowest paid employees. The absolute spread between highest and lowest paid workers within a given work level tended to widen with each rise in work level for most occupations. All occupations showed a substantial degree of overlapping of individual salaries between work levels. Ranges in salary rates of employees in established pay grades or work levels within salary structures of individual firms also often overlapped substantially.

The middle 50 and 80 percent of the salary range, and the median salary for each occupational work level, have been charted (charts 2 and 3). The charts point up occupational pay relationships as well as the typically greater degree of salary dispersion associated with the higher work levels in each occupational series.

Expressing the salary range of the middle 50 percent of employees in each work level as a percent of the median salary permits comparison of salary ranges and eliminates extremely low and high salaries from each comparison. As shown in text table 3, the degree of dispersion ranged from 15 to 30 percent of the median salary in 66 of the 75 work levels. The degree of dispersion tended to be greater in the clerical occupations than in the other occupations studied.

Differences in salaries paid within work levels reflect a variety of factors other than duties and responsibilities. These include salary structures within establishments which provide for a range of rates for each grade level; variations in occupational employment among industries, as illustrated in table 7 and chart 4; and salary variations among regions—particularly for clerical occupations.[13] Clerical employees usually are recruited locally while professional and administrative positions tend to be recruited on a broader regional or national basis.

Pay differences by industry

By combining the data for all levels of work studied in each occupation, relative salary levels in major industry divisions may be compared to each other and to salary levels in all industries combined (table 8).

[13] For analysis of interarea pay differentials in clerical salaries, see *Area Wage Surveys: Metropolitan Areas, United States and Regional Summaries, 1973-74*, Bulletin 1795-29 (Bureau of Labor Statistics, 1976) and *Wage Differences Among Metropolitan Areas, 1974-75*, Summary 76-10 (Bureau of Labor Statistics, 1976).

Text table 3. Distribution of work levels by degree of salary dispersion

Occupation	Number of work levels	Number of levels having degree of dispersion[1] of–				
		Under 15 percent	15 and under 20 percent	20 and under 25 percent	25 and under 30 percent	30 percent and over
All occupations	78	1	13	32	21	11
Accountants	5	–	1	3	1	–
Auditors	4	–	–	2	2	–
Chief accountants	4	–	2	2	–	–
Attorneys	6	–	1	5	–	–
Buyers	4	–	–	2	2	–
Job analysts	3	–	–	3	–	–
Directors of personnel	4	–	–	2	1	1
Chemists	8	–	1	6	1	–
Engineers	8	1	5	2	–	–
Engineering technicians	5	–	2	3	–	–
Drafters[2]	4	–	–	–	3	1
Computer operators	6	–	1	1	3	1
Clerical workers	17	–	–	1	8	8

[1] Degree of dispersion equals the salary range of the middle 50 percent of employees in a work level expressed as a percent of the median salary for that level.

[2] Includes drafter-tracers.

Chart 2. Salaries in professional and technical occupations, March 1977

Median monthly salaries and ranges within which fall 50 percent and 80 percent of employees

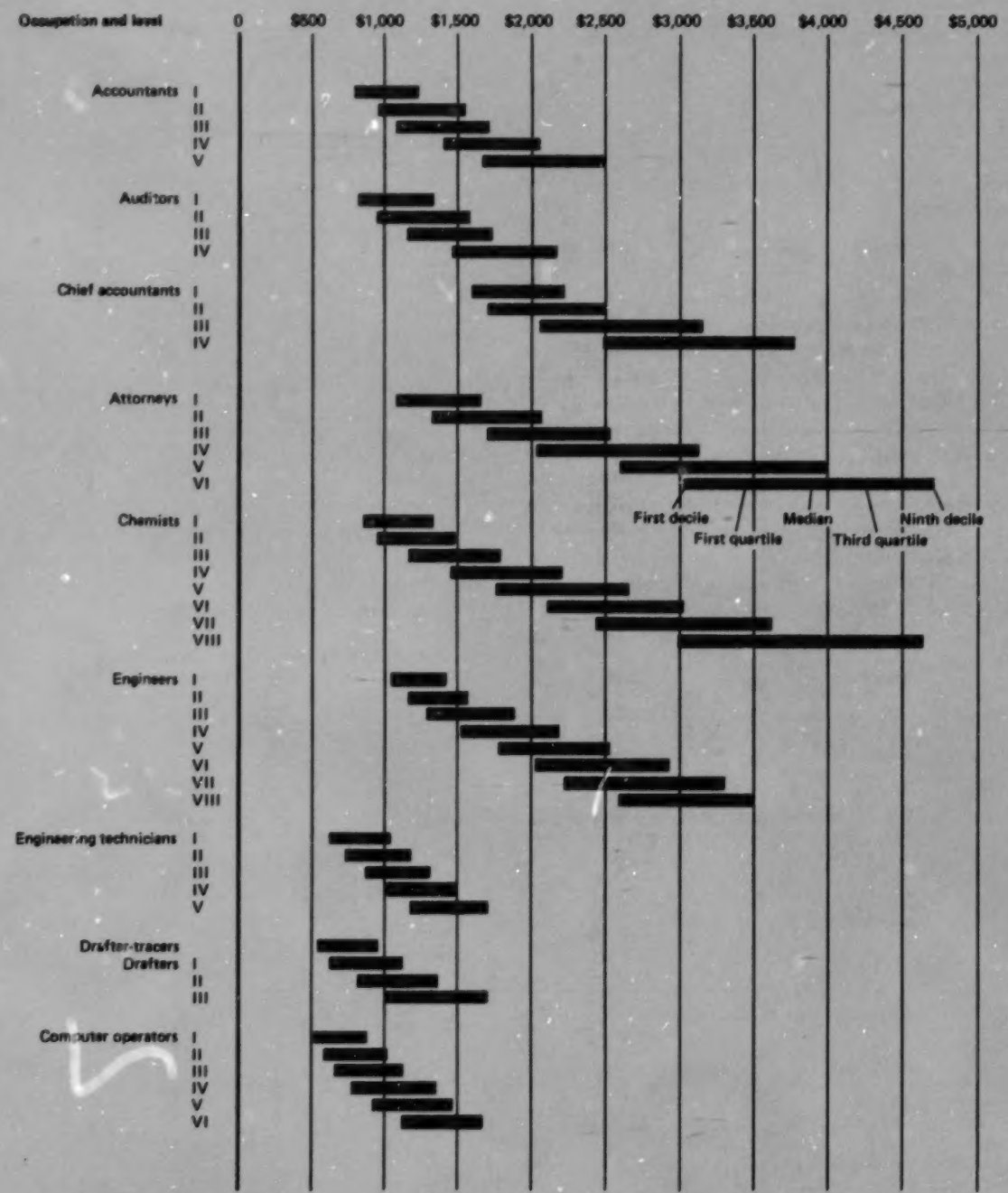


Chart 3. Salaries in administrative and clerical occupations, March 1977

Median monthly salaries and ranges within which fell 50 percent and 80 percent of employees

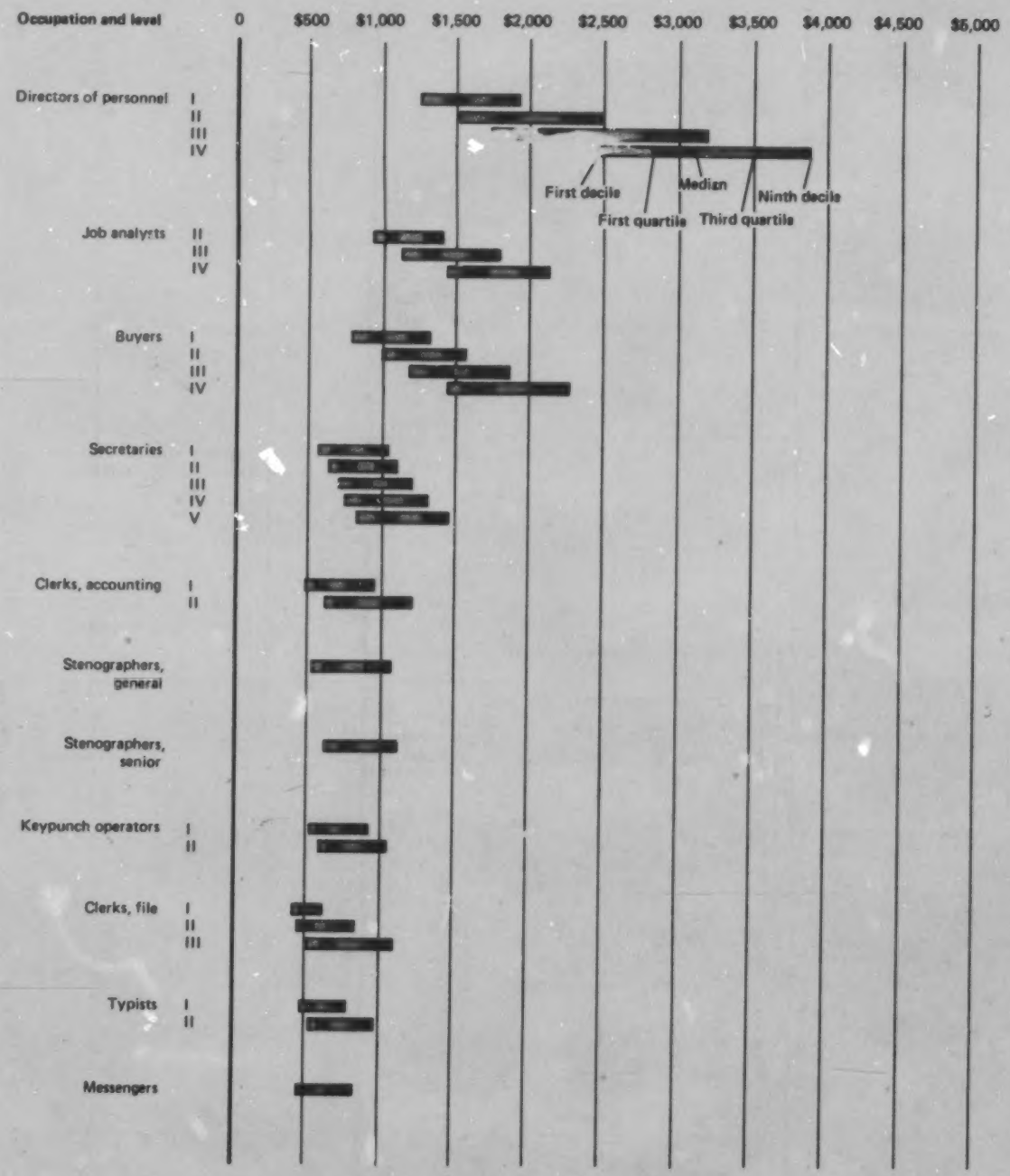
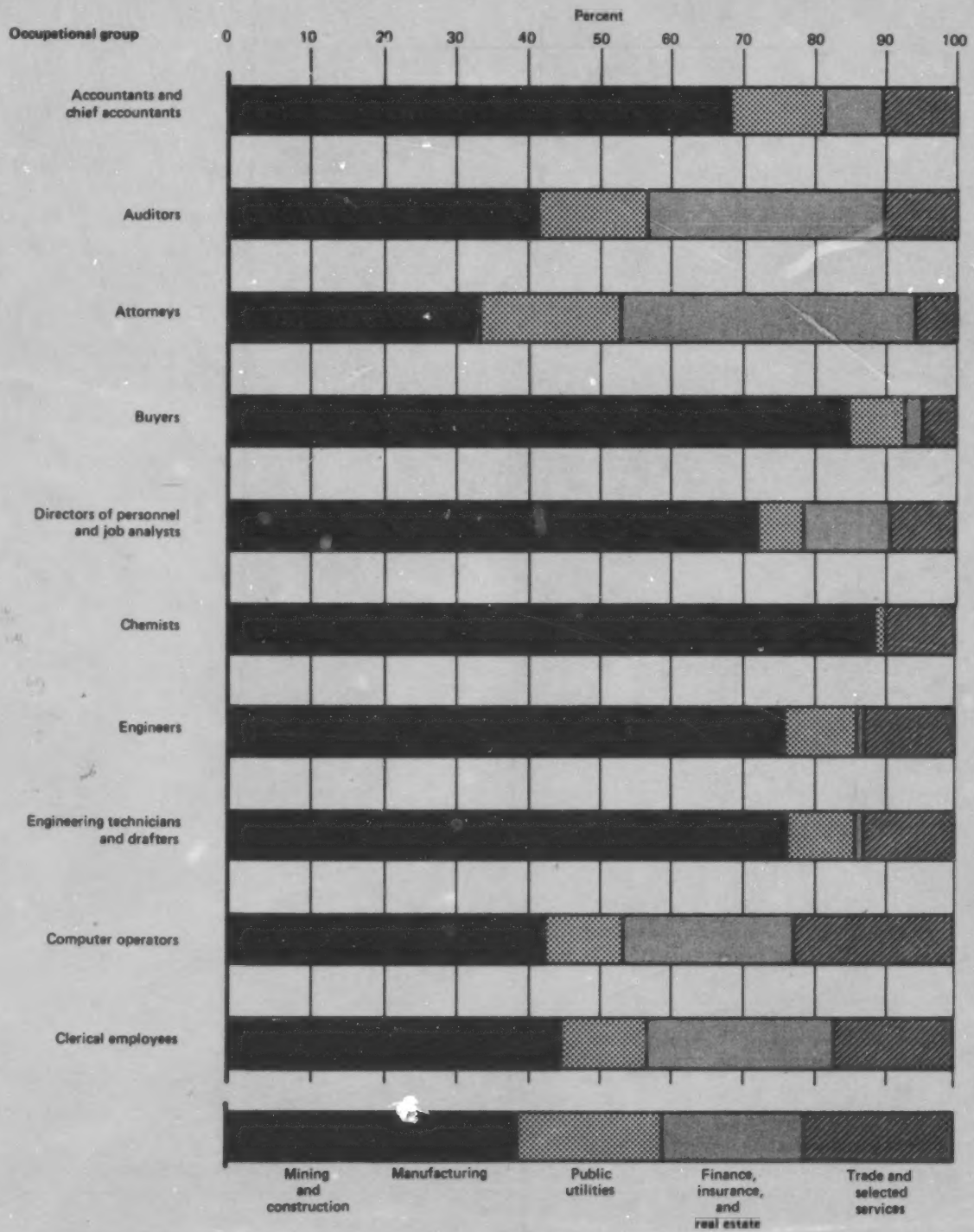


Chart 4. Relative employment in selected occupational groups by industry division, March 1977



Relative salary levels for the 12 professional, administrative, and technical support occupations tended to be closest to the average for all industry divisions in manufacturing. However, manufacturing contributed more to total employment than any other industry division for all but one (attorneys) of the 12 occupations. Relative salary levels in the mining and public utilities industry divisions were generally the highest.

For most occupations studied, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in other industry divisions. Where retail trade and the finance industries contributed a substantial proportion of the total employment in an occupation, the average salary for all industries combined was lowered, and the relative levels in industries such as manufacturing and public utilities tended to be well above 100 percent of the all-industry level. For example, relative pay levels for file clerks (109 percent of the all-industry level in manufacturing and 141 percent in public utilities) reflected the influence of lower salaries for the high proportion (63 percent) of these workers employed in the finance industries. The finance industries, however, also reported lower average standard weekly hours than the other industries surveyed, as shown in table 9.

Average standard weekly hours

The length of the standard workweek, on which the regular straight-time salary is based, was obtained for individual employees in the occupations studied. When individual weekly hours were not available, particularly for some higher level professional and administrative positions, the predominant workweek of the office work force was used as the standard workweek. The distribution of average weekly hours (rounded to the nearest half hour) is presented in table 9 for each occupation by major industry division surveyed. Average weekly hours were lower in finance, insurance, and real estate (38 hours in most occupations) than in the other industry divisions (39 or 39.5 hours). Average weekly hours have been stable over the past decade.[14]

[14] For information on scheduled weekly hours of office workers employed in metropolitan areas, see *Area Wage Surveys, Selected Metropolitan Areas, 1975*, Bulletin 1850-88 (Bureau of Labor Statistics, 1977).

Although only nationwide salary data are presented in this bulletin, salary data for clerical and drafting occupations are available for each of the metropolitan areas in which the Bureau conducts area wage surveys. These area reports also include information on supplementary benefits such as paid vacations, holidays, and health, insurance, and pension plans relating to nonsupervisory office workers. A directory of occupational wage surveys, which contains a listing by State and area, is available at the Bureau's regional offices listed on the inside back cover of this bulletin.

Table 1. Average salaries: United States

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] United States except Alaska and Hawaii, March 1977)

Occupation and level[2]	Number of employees[3]	Monthly salaries[4]				Annual salaries[4]			
		Mean	Median	Middle range[5]		Mean	Median	Middle range[5]	
				First quartile	Third quartile			First quartile	Third quartile
ACCOUNTANTS AND AUDITORS									
ACCOUNTANTS I	8,101	$1,013	$1,000	$910	$1,100	$12,155	$12,000	$10,916	$13,200
ACCOUNTANTS II	19,271	1,219	1,183	1,050	1,375	14,624	14,194	12,600	16,500
ACCOUNTANTS III	35,109	1,379	1,350	1,208	1,523	16,545	16,200	14,494	18,276
ACCOUNTANTS IV	22,227	1,697	1,667	1,513	1,850	20,367	20,004	18,156	22,200
ACCOUNTANTS V	8,465	2,087	2,082	1,858	2,289	25,042	24,987	22,291	27,469
AUDITORS I	1,539	1,067	1,025	883	1,155	12,570	12,300	10,596	13,860
AUDITORS II	2,903	1,209	1,138	1,034	1,342	14,503	13,656	12,410	16,104
AUDITORS III	5,612	1,426	1,400	1,260	1,545	17,108	16,800	15,120	18,540
AUDITORS IV	3,646	1,794	1,759	1,590	1,983	21,526	21,060	19,080	23,800
CHIEF ACCOUNTANTS I	566	1,880	1,808	1,716	2,057	22,558	21,600	20,621	24,681
CHIEF ACCOUNTANTS II	1,197	2,110	2,086	1,841	2,291	25,320	25,027	22,092	27,489
CHIEF ACCOUNTANTS III	782	2,610	2,511	2,291	2,901	31,324	30,137	27,493	34,810
CHIEF ACCOUNTANTS IV	360	3,066	3,007	2,708	3,307	36,789	36,086	32,496	39,684
ATTORNEYS									
ATTORNEYS I	1,286	1,336	1,303	1,173	1,495	16,033	15,600	14,078	17,460
ATTORNEYS II	1,925	1,661	1,625	1,475	1,825	19,938	19,500	17,700	21,900
ATTORNEYS III	2,504	2,122	2,083	1,883	2,308	25,460	24,996	22,591	27,700
ATTORNEYS IV	2,575	2,581	2,560	2,287	2,865	30,973	30,720	27,439	34,380
ATTORNEYS V	1,881	3,236	3,166	2,916	3,562	38,828	37,992	34,986	42,504
ATTORNEYS VI	822	3,876	3,875	3,440	4,262	46,509	46,500	41,283	51,144
BUYERS									
BUYERS I	5,229	1,029	999	880	1,163	12,346	11,992	10,555	13,953
BUYERS II	14,513	1,258	1,230	1,099	1,402	15,099	14,760	13,184	16,823
BUYERS III	16,233	1,502	1,473	1,313	1,643	18,021	17,675	15,760	19,716
BUYERS IV	5,632	1,826	1,765	1,576	2,016	21,907	21,180	18,916	24,211
PERSONNEL MANAGEMENT									
JOB ANALYSTS II	240	1,131	1,085	1,000	1,298	13,572	13,020	12,000	15,594
JOB ANALYSTS III	558	1,418	1,375	1,250	1,585	17,016	16,500	14,994	19,020
JOB ANALYSTS IV	569	1,742	1,724	1,534	1,935	20,908	20,692	18,405	23,220
DIRECTORS OF PERSONNEL I	1,139	1,588	1,582	1,398	1,741	19,062	18,979	16,779	20,967
DIRECTORS OF PERSONNEL II	2,239	1,980	1,916	1,716	2,200	23,755	22,991	20,569	26,400
DIRECTORS OF PERSONNEL III	1,038	2,432	2,340	2,000	2,750	29,188	28,082	24,000	33,000
DIRECTORS OF PERSONNEL IV	398	3,149	3,100	2,825	3,500	37,785	37,200	33,900	42,000
CHEMISTS AND ENGINEERS									
CHEMISTS I	2,110	1,073	1,059	934	1,217	12,872	12,708	11,210	14,599
CHEMISTS II	4,171	1,203	1,191	1,075	1,340	14,439	14,292	12,895	16,080
CHEMISTS III	9,557	1,467	1,458	1,304	1,612	17,600	17,493	15,642	19,344
CHEMISTS IV	11,163	1,806	1,785	1,600	2,000	21,674	21,420	19,200	24,000
CHEMISTS V	9,132	2,184	2,158	1,940	2,408	26,214	25,896	23,280	28,896
CHEMISTS VI	4,565	2,544	2,499	2,291	2,750	30,526	29,993	27,489	33,000
CHEMISTS VII	1,564	3,027	3,025	2,666	3,314	36,329	36,300	31,987	39,765
CHEMISTS VIII	438	3,720	3,657	3,205	4,019	44,642	43,884	38,460	48,233
ENGINEERS I	15,892	1,218	1,200	1,125	1,300	14,613	14,400	13,500	15,600
ENGINEERS II	32,784	1,392	1,336	1,242	1,447	16,221	16,026	14,904	17,363
ENGINEERS III	92,340	1,558	1,535	1,400	1,700	18,696	18,420	16,800	20,400
ENGINEERS IV	125,903	1,839	1,824	1,658	2,010	22,072	21,888	19,892	24,120
ENGINEERS V	89,094	2,135	2,108	1,926	2,323	25,620	25,296	23,112	27,881
ENGINEERS VI	46,235	2,448	2,415	2,199	2,666	29,376	28,980	26,389	31,987
ENGINEERS VII	17,935	2,790	2,716	2,436	3,008	32,999	32,588	29,232	36,097
ENGINEERS VIII	4,704	3,172	3,096	2,760	3,458	38,063	37,124	33,120	41,496

See footnotes at end of table.

Table 1. Average salaries: United States—Continued

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] United States except Alaska and Hawaii, March 1977)

Occupation and level[2]	Number of employees[3]	Monthly salaries[4]				Annual salaries[4]			
		Mean	Median	Middle range[5]		Mean	Median	Middle range[5]	
				First quartile	Third quartile			First quartile	Third quartile
TECHNICAL SUPPORT									
ENGINEERING TECHNICIANS I	3,142	$811	$782	$700	$893	$9,727	$9,385	$8,400	$10,722
ENGINEERING TECHNICIANS II	15,033	946	930	823	1,050	11,355	11,160	9,876	12,600
ENGINEERING TECHNICIANS III	29,036	1,096	1,096	959	1,222	13,151	13,154	11,513	14,662
ENGINEERING TECHNICIANS IV	28,660	1,268	1,269	1,141	1,386	15,221	15,225	13,695	16,633
ENGINEERING TECHNICIANS V	14,327	1,436	1,424	1,309	1,557	17,237	17,093	15,705	18,684
DRAFTER-TRACERS	4,090	766	750	646	896	9,214	8,994	7,757	10,749
DRAFTERS I	18,140	863	829	720	987	10,354	9,948	8,640	11,601
DRAFTERS II	31,418	1,069	1,040	916	1,205	12,833	12,480	10,996	14,457
DRAFTERS III	29,568	1,319	1,288	1,126	1,499	15,828	15,454	13,515	17,909
COMPUTER OPERATORS I	4,890	663	634	574	715	7,979	7,612	6,882	8,580
COMPUTER OPERATORS II	8,889	789	770	662	895	9,463	9,240	7,947	10,741
COMPUTER OPERATORS III	25,636	877	852	742	980	10,529	10,219	8,901	11,758
COMPUTER OPERATORS IV	16,291	1,046	1,010	897	1,186	12,557	12,120	10,764	14,234
COMPUTER OPERATORS V	3,775	1,173	1,154	1,004	1,304	14,099	13,847	12,044	15,653
COMPUTER OPERATORS VI	1,008	1,369	1,369	1,245	1,511	16,423	16,424	14,940	18,137
CLERICAL									
CLERKS, ACCOUNTING I	96,181	678	638	550	767	8,138	7,656	6,597	9,204
CLERKS, ACCOUNTING II	82,419	866	817	695	1,000	10,388	9,802	8,340	12,000
CLERKS, FILE I	29,073	506	482	440	543	6,068	5,788	5,280	6,516
CLERKS, FILE II	16,834	597	550	487	660	7,168	6,600	5,839	7,920
CLERKS, FILE III	9,446	757	702	613	881	9,082	8,424	7,352	10,572
KEYPUNCH OPERATORS I	63,325	670	630	563	739	8,045	7,560	6,757	8,864
KEYPUNCH OPERATORS II	48,523	778	745	650	873	9,337	8,940	7,795	10,476
MESSENGERS	21,949	597	551	490	660	7,166	6,611	5,880	7,925
SECRETARIES I	41,702	777	755	655	869	9,329	9,060	7,860	10,428
SECRETARIES II	76,726	842	817	713	943	10,100	9,802	8,551	11,314
SECRETARIES III	85,480	930	902	795	1,045	11,159	10,824	9,543	12,540
SECRETARIES IV	34,097	1,012	998	855	1,150	12,138	11,972	10,260	13,800
SECRETARIES V	19,589	1,117	1,100	950	1,275	13,407	13,200	11,400	15,300
STENOGRAPHERS, GENERAL	33,228	757	715	612	879	9,086	8,580	7,344	10,548
STENOGRAPHERS, SENIOR	38,119	848	820	715	969	10,178	9,840	8,577	11,627
TYPISTS I	49,651	600	570	504	652	7,202	6,840	6,048	7,821
TYPISTS II	34,874	715	675	587	812	8,585	8,100	7,039	9,740

[1] For scope of study, see table A-1 in appendix A.

[2] Occupational definitions appear in appendix C.

[3] Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

[4] Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

[5] The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

Table 2. Average salaries: Metropolitan areas

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,[1] United States except Alaska and Hawaii, March 1977)

Occupation and level[2]	Number of employees[3]	Monthly salaries[4]				Annual salaries[4]			
		Mean	Median	Middle range[5]		Mean	Median	Middle range[5]	
				First quartile	Third quartile			First quartile	Third quartile
ACCOUNTANTS AND AUDITORS									
ACCOUNTANTS I	7,074	$1,014	$1,000	$905	$1,080	$12,170	$11,995	$10,860	$12,960
ACCOUNTANTS II	13,738	1,230	1,185	1,058	1,354	14,755	14,220	12,695	16,247
ACCOUNTANTS III	30,504	1,388	1,335	1,206	1,487	16,661	16,020	14,494	17,843
ACCOUNTANTS IV	19,604	1,704	1,650	1,500	1,800	20,443	19,800	18,000	21,600
ACCOUNTANTS V	7,612	2,094	2,080	1,850	2,285	25,127	24,960	22,200	27,420
AUDITORS I	1,527	1,047	1,025	883	1,155	12,570	12,300	10,596	13,860
AUDITORS II	2,743	1,213	1,140	1,041	1,351	14,559	13,680	12,495	16,216
AUDITORS III	5,246	1,431	1,400	1,260	1,525	17,168	16,800	15,120	18,300
AUDITORS IV	3,458	1,796	1,791	1,595	2,000	21,562	21,491	19,146	24,000
CHIEF ACCOUNTANTS I	492	1,897	1,790	1,718	1,958	22,759	21,484	20,621	23,500
CHIEF ACCOUNTANTS II	968	2,149	2,108	1,961	2,291	25,787	25,300	23,533	27,489
CHIEF ACCOUNTANTS III	643	2,591	2,499	2,249	2,755	31,088	29,988	26,989	33,060
CHIEF ACCOUNTANTS IV	358	3,067	3,007	2,708	3,307	36,808	36,084	32,496	39,684
ATTORNEYS									
ATTORNEYS I	1,252	1,340	1,299	1,169	1,456	16,075	15,594	14,032	17,467
ATTORNEYS II	1,832	1,666	1,623	1,475	1,803	19,990	19,500	17,700	21,638
ATTORNEYS III	2,439	2,123	2,083	1,883	2,316	25,481	24,996	22,591	27,789
ATTORNEYS IV	2,513	2,585	2,541	2,291	2,866	31,021	30,733	27,489	34,386
ATTORNEYS V	1,775	3,237	3,167	2,899	3,582	38,844	38,004	34,788	42,983
ATTORNEYS VI	810	3,876	3,875	3,432	4,262	46,512	46,500	41,184	51,149
BUYERS									
BUYERS I	4,313	1,044	999	885	1,138	12,531	11,992	10,620	13,661
BUYERS II	11,890	1,271	1,206	1,086	1,347	15,246	14,472	13,035	16,163
BUYERS III	14,092	1,513	1,450	1,308	1,610	18,156	17,400	15,694	19,320
BUYERS IV	5,292	1,823	1,745	1,570	1,975	21,879	20,940	18,840	23,700
PERSONNEL MANAGEMENT									
JOB ANALYSTS II	216	1,147	1,107	1,050	1,287	13,768	13,284	12,595	15,444
JOB ANALYSTS III	537	1,428	1,375	1,250	1,600	17,137	16,500	15,000	19,200
JOB ANALYSTS IV	548	1,743	1,720	1,534	1,935	20,918	20,640	18,405	23,220
DIRECTORS OF PERSONNEL I	717	1,613	1,583	1,499	1,716	19,353	18,992	17,993	20,593
DIRECTORS OF PERSONNEL II	1,753	1,991	1,958	1,725	2,285	23,897	23,491	20,700	27,420
DIRECTORS OF PERSONNEL III	903	2,436	2,416	2,050	2,832	29,228	28,988	24,600	33,986
DIRECTORS OF PERSONNEL IV	298	3,157	3,100	2,833	3,453	37,882	37,200	33,996	41,436
CHEMISTS AND ENGINEERS									
CHEMISTS I	1,894	1,060	1,043	904	1,191	12,722	12,516	10,853	14,296
CHEMISTS II	3,747	1,204	1,172	1,066	1,322	14,450	14,064	12,795	15,864
CHEMISTS III	8,353	1,474	1,433	1,300	1,579	17,687	17,193	15,600	18,952
CHEMISTS IV	9,330	1,811	1,761	1,590	1,935	21,735	21,132	19,080	23,220
CHEMISTS V	7,807	2,174	2,112	1,908	2,316	26,090	25,344	22,891	27,789
CHEMISTS VI	4,017	2,545	2,515	2,295	2,749	30,544	30,180	27,541	32,987
CHEMISTS VII	1,459	3,032	3,041	2,691	3,299	36,381	36,492	32,287	39,584
CHEMISTS VIII	397	3,732	3,674	3,198	4,019	44,781	44,088	38,376	48,233
ENGINEERS I	14,541	1,220	1,196	1,123	1,279	14,634	14,352	13,475	15,351
ENGINEERS II	30,062	1,356	1,325	1,236	1,420	16,273	15,900	14,834	17,040
ENGINEERS III	83,554	1,567	1,517	1,399	1,660	18,807	18,209	16,793	19,917
ENGINEERS IV	114,478	1,850	1,800	1,650	1,965	22,205	21,600	19,800	23,580
ENGINEERS V	82,161	2,138	2,086	1,916	2,266	25,659	25,027	22,991	27,189
ENGINEERS VI	43,564	2,447	2,392	2,186	2,616	29,363	28,704	26,226	31,388
ENGINEERS VII	17,267	2,747	2,700	2,425	2,986	32,959	32,400	29,100	35,832
ENGINEERS VIII	4,620	3,170	3,092	2,763	3,450	38,040	37,100	33,161	41,400

See footnotes at end of table.

Table 2. Average salaries: Metropolitan areas—Continued

(Employment and average salaries for selected professional, administrative, technical, and clerical occupations in private industry, metropolitan areas,[1] United States except Alaska and Hawaii, March 1977)

Occupation and level[2]	Number of employees[3]	Monthly salaries[4]				Annual salaries[4]			
		Mean	Median	Middle range[5]		Mean	Median	Middle range[5]	
				First quartile	Third quartile			First quartile	Third quartile
TECHNICAL SUPPORT									
ENGINEERING TECHNICIANS I	2,611	$814	$773	$700	$870	$9,765	$9,270	$8,400	$10,440
ENGINEERING TECHNICIANS II	12,879	941	910	801	1,012	11,290	10,920	9,615	12,149
ENGINEERING TECHNICIANS III	22,171	1,092	1,073	950	1,180	13,104	12,879	11,395	14,160
ENGINEERING TECHNICIANS IV	26,058	1,272	1,250	1,136	1,358	15,266	15,000	13,636	16,296
ENGINEERING TECHNICIANS V	17,055	1,437	1,410	1,304	1,530	17,250	16,914	15,642	18,357
DRAFTER-TRACERS	3,422	781	779	667	909	9,377	9,343	8,003	10,908
DRAFTERS I	15,633	872	819	717	932	10,468	9,823	8,600	11,179
DRAFTERS II	26,800	1,086	1,107	953	1,347	13,026	13,285	11,436	16,163
DRAFTERS III	26,932	1,334	1,275	1,121	1,423	16,003	15,300	13,452	17,100
COMPUTER OPERATORS I	4,715	666	633	574	726	7,989	7,596	6,882	8,707
COMPUTER OPERATORS II	7,913	793	782	692	932	9,512	9,385	8,310	11,184
COMPUTER OPERATORS III	23,518	879	852	747	973	10,552	10,219	8,968	11,679
COMPUTER OPERATORS IV	14,792	1,053	1,010	900	1,174	12,637	12,110	10,800	14,088
COMPUTER OPERATORS V	3,604	1,177	1,156	1,004	1,304	14,128	13,867	12,044	15,648
COMPUTER OPERATORS VI	914	1,365	1,368	1,238	1,482	16,378	16,416	14,860	17,780
CLERICAL									
CLERKS, ACCOUNTING I	84,434	682	626	547	739	8,187	7,508	6,573	8,864
CLERKS, ACCOUNTING II	73,709	871	808	690	975	10,452	9,698	8,280	11,700
CLERKS, FILE I	26,711	505	482	440	542	6,059	5,788	5,280	6,507
CLERKS, FILE II	15,786	596	550	485	662	7,151	6,600	5,820	7,947
CLERKS, FILE III	5,020	753	697	613	885	9,036	8,369	7,352	10,616
KEYPUNCH OPERATORS I	57,667	675	634	578	739	8,104	7,612	6,936	8,864
KEYPUNCH OPERATORS II	42,661	785	745	650	863	9,418	8,940	7,800	10,355
MESSENGERS	20,657	597	563	490	672	7,163	6,757	5,880	8,064
SECRETARIES I	38,172	782	756	660	864	9,386	9,072	7,925	10,365
SECRETARIES II	73,019	845	806	710	914	10,143	9,672	8,520	10,996
SECRETARIES III	79,620	935	902	795	1,034	11,222	10,820	9,542	12,409
SECRETARIES IV	51,556	1,017	993	857	1,138	12,206	11,911	10,289	13,661
SECRETARIES V	18,683	1,125	1,108	958	1,280	13,495	13,296	11,495	15,360
STENOGRAPHERS, GENERAL	29,694	759	713	613	870	9,114	8,551	7,352	10,448
STENOGRAPHERS, SENIOR	35,497	849	810	709	963	10,184	9,720	8,512	11,316
TYPISTS I	44,744	602	579	511	671	7,221	6,965	6,126	8,057
TYPISTS II	32,536	718	673	589	795	8,616	8,082	7,068	9,542

[1] For scope of study, see table A-1 in appendix A.

[2] Occupational definitions appear in appendix C.

[3] Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

[4] Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

[5] The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

Table 3. Average salaries: Establishments employing 2,500 workers or more

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] in establishments employing 2,500 workers or more,[2] United States except Alaska and Hawaii, March 1977)

Occupation and level[3]	Number of employees[4]	Monthly salaries[5]				Levels in establishments employing 2,500 workers or more expressed as percent of those in all establishments combined	
		Mean	Median	Middle range[6]			
				First quartile	Third quartile	Employment	Mean salaries
ACCOUNTANTS AND AUDITORS							
ACCOUNTANTS I	2,283	$1,118	$960	$917	$1,008	27	110
ACCOUNTANTS II	5,988	1,341	1,095	1,025	1,166	30	110
ACCOUNTANTS III	9,485	1,502	1,230	1,169	1,302	27	109
ACCOUNTANTS IV	6,535	1,769	1,506	1,416	1,590	29	104
ACCOUNTANTS V	3,295	2,109	1,920	1,779	2,060	30	101
AUDITORS I	695	1,146	1,065	980	1,166	43	109
AUDITORS II	1,246	1,311	1,166	1,052	1,342	43	108
AUDITORS III	1,986	1,490	1,369	1,235	1,491	35	105
AUDITORS IV	1,343	1,944	1,686	1,565	1,812	42	103
CHIEF ACCOUNTANTS II	70	2,532	2,100	2,083	2,291	6	120
CHIEF ACCOUNTANTS III	236	2,791	2,620	2,360	2,925	30	107
CHIEF ACCOUNTANTS IV	129	3,046	2,999	2,677	3,300	34	99
ATTORNEYS							
ATTORNEYS I	284	1,584	1,500	1,450	1,624	16	119
ATTORNEYS II	565	1,829	1,621	1,500	1,716	29	110
ATTORNEYS III	792	2,262	1,999	1,833	2,083	32	107
ATTORNEYS IV	906	2,720	2,457	2,291	2,551	35	106
ATTORNEYS V	640	3,254	3,000	2,817	3,232	36	101
ATTORNEYS VI	400	3,869	3,597	3,292	3,850	49	100
BUYERS							
BUYERS I	1,059	1,232	1,033	956	1,100	28	120
BUYERS II	3,438	1,406	1,120	1,034	1,177	24	112
BUYERS III	5,117	1,580	1,325	1,220	1,413	32	106
BUYERS IV	3,496	1,836	1,680	1,549	1,845	62	101
PERSONNEL MANAGEMENT							
JOB ANALYSTS II	127	1,100	1,193	1,061	1,379	53	104
JOB ANALYSTS III	327	1,508	1,490	1,328	1,638	59	106
JOB ANALYSTS IV	364	1,789	1,780	1,625	1,935	64	103
DIRECTORS OF PERSONNEL II	116	2,444	2,493	2,295	2,800	5	134
DIRECTORS OF PERSONNEL III	153	2,956	2,992	2,607	3,291	15	122
DIRECTORS OF PERSONNEL IV	160	3,345	3,314	2,925	3,650	47	106
CHEMISTS AND ENGINEERS							
CHEMISTS I	404	1,178	1,059	958	1,143	19	110
CHEMISTS II	1,150	1,363	1,208	1,150	1,283	28	112
CHEMISTS III	2,972	1,607	1,420	1,316	1,490	31	110
CHEMISTS IV	3,738	1,928	1,737	1,624	1,810	34	107
CHEMISTS V	3,136	2,276	2,016	1,883	2,170	34	104
CHEMISTS VI	2,148	2,606	2,490	2,291	2,649	47	102
CHEMISTS VII	706	3,086	3,040	2,729	3,275	45	102
ENGINEERS I	7,078	1,275	1,190	1,108	1,195	45	105
ENGINEERS II	14,513	1,392	1,296	1,200	1,300	44	103
ENGINEERS III	44,321	1,620	1,436	1,350	1,525	48	104
ENGINEERS IV	69,655	1,980	1,720	1,604	1,816	52	103
ENGINEERS V	49,776	2,181	2,000	1,869	2,110	56	102
ENGINEERS VI	25,909	2,498	2,295	2,133	2,430	56	102
ENGINEERS VII	11,562	2,736	2,582	2,357	2,781	64	102
ENGINEERS VIII	3,258	3,231	2,990	2,730	3,217	69	102

See footnotes at end of table.

Table 3. Average salaries: Establishments employing 2,500 workers or more—Continued

(Employment and average monthly salaries for selected professional, administrative, technical, and clerical occupations in private industry,[1] in establishments employing 2,500 workers or more,[2] United States except Alaska and Hawaii, March 1977)

Occupation and level[3]	Number of employees[4]	Monthly salaries[5]				Levels in establishments employing 2,500 workers or more expressed as percent of those in all establishments combined	
		Mean	Median	Middle range[6]			
				First quartile	Third quartile	Employment	Mean salaries
TECHNICAL SUPPORT							
ENGINEERING TECHNICIANS I	1,413	$865	$773	$723	$834	45	107
ENGINEERING TECHNICIANS II	9,349	1,004	850	800	900	36	106
ENGINEERING TECHNICIANS III	19,908	1,127	1,020	962	1,096	44	103
ENGINEERING TECHNICIANS IV	15,909	1,297	1,225	1,136	1,293	54	102
ENGINEERING TECHNICIANS V	12,975	1,451	1,400	1,309	1,490	71	101
DRAFTER-TRACERS	1,695	849	764	667	870	41	111
DRAFTERS I	5,012	1,010	826	743	860	28	117
DRAFTERS II	9,274	1,170	1,017	965	1,091	30	109
DRAFTERS III	12,050	1,429	1,191	1,086	1,290	41	108
COMPUTER OPERATORS I	1,065	792	644	606	709	22	119
COMPUTER OPERATORS II	2,448	872	695	643	739	28	111
COMPUTER OPERATORS III	6,589	997	799	743	850	24	114
COMPUTER OPERATORS IV	5,893	1,163	975	912	1,043	36	111
COMPUTER OPERATORS V	1,760	1,253	1,182	1,069	1,276	47	107
COMPUTER OPERATORS VI	568	1,419	1,309	1,287	1,465	94	103
CLERICAL							
CLERKS, ACCOUNTING I	17,051	613	575	495	627	18	120
CLERKS, ACCOUNTING II	19,116	1,005	732	645	797	23	116
CLERKS, FILE I	2,969	608	478	469	495	10	120
CLERKS, FILE II	3,528	695	520	475	547	21	116
CLERKS, FILE III	2,199	861	671	617	794	40	114
KEYPUNCH OPERATORS I	13,030	625	580	547	635	21	123
KEYPUNCH OPERATORS II	12,622	891	678	613	735	27	114
MESSENGERS	6,480	660	550	504	630	29	110
SECRETARIES I	12,675	849	700	650	747	30	109
SECRETARIES II	24,792	929	752	700	800	31	110
SECRETARIES III	29,957	1,007	813	758	871	35	108
SECRETARIES IV	17,160	1,140	916	826	993	32	113
SECRETARIES V	6,139	1,248	1,050	933	1,125	31	112
STENOGRAPHERS, GENERAL	11,619	632	652	593	708	34	110
STENOGRAPHERS, SENIOR	15,474	885	752	695	819	41	104
TYPISTS I	9,620	686	521	481	543	20	114
TYPISTS II	12,235	792	610	554	643	35	111

[1] For scope of study, see table A-1 in appendix A.

[2] Includes data from 6 large companies that provide companywide data not identified by size of establishment.

[3] Occupational definitions appear in appendix C.

[4] Occupational employment estimates relate to the total in all establishments within the scope of the survey and not to the number actually surveyed. For further explanation, see appendix A.

[5] Salaries reported are standard salaries paid for standard work schedules; i.e., the straight-time salary corresponding to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

[6] The middle range (interquartile) is the central part of the array excluding the upper and lower fourths of the employee distribution.

Table 4. Employment distribution by salary: Professional and administrative occupations

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Accountants					Auditors				Chief accountants			
	I	II	III	IV	V	I	II	III	IV	I	II	III	IV
UNDER $725	1.2	-	-	-	-	-	-	-	-	-	-	-	-
$725 AND UNDER $750	2.3	-	-	-	-	(1.1)	-	-	-	-	-	-	-
$750 AND UNDER $775	2.7	-	-	-	-	1.9	-	-	-	-	-	-	-
$775 AND UNDER $800	3.4	-	-	-	-	2.7	-	-	-	-	-	-	-
$800 AND UNDER $825	2.4	-	-	-	-	3.1	-	-	-	-	-	-	-
$825 AND UNDER $850	3.6	-	-	-	-	8.7	(2.1)	-	-	-	-	-	-
$850 AND UNDER $875	4.1	(2.1)	-	-	-	5.8	1.7	-	-	-	-	-	-
$875 AND UNDER $900	2.9	1.6	-	-	-	2.8	1.4	-	-	-	-	-	-
$900 AND UNDER $925	7.8	3.9	-	-	-	6.5	3.0	-	-	-	-	-	-
$925 AND UNDER $950	3.8	1.9	-	-	-	1.6	1.9	-	-	-	-	-	-
$950 AND UNDER $975	9.2	2.9	(2.5)	-	-	2.7	3.2	-	-	-	-	-	-
$975 AND UNDER $1,000	5.8	3.8	1.0	-	-	7.5	5.3	(1.1)	-	-	-	-	-
$1,000 AND UNDER $1,050	13.4	7.9	3.0	-	-	12.0	10.3	2.4	-	-	-	-	-
$1,050 AND UNDER $1,100	12.4	9.9	3.9	-	-	11.0	14.0	3.0	-	-	-	-	-
$1,100 AND UNDER $1,150	8.2	9.6	4.7	-	-	7.0	8.4	3.2	-	-	-	-	-
$1,150 AND UNDER $1,200	5.0	8.3	7.5	(1.4)	-	5.2	8.4	4.5	-	-	-	-	-
$1,200 AND UNDER $1,250	3.1	8.0	8.7	1.6	-	4.4	5.2	9.4	(1.3)	-	-	-	-
$1,250 AND UNDER $1,300	2.7	6.7	7.5	1.4	-	2.7	3.9	8.8	1.2	-	-	-	-
$1,300 AND UNDER $1,350	2.5	5.6	10.4	3.0	-	4.9	6.7	7.2	1.4	-	-	-	-
$1,350 AND UNDER $1,400	1.1	5.1	8.5	3.2	-	1.2	4.9	8.8	2.7	(0.4)	-	-	-
$1,400 AND UNDER $1,450	(2.6)	4.1	7.2	5.7	-	1.7	4.7	10.8	2.7	3.0	-	-	-
$1,450 AND UNDER $1,500	-	4.9	6.9	8.0	(2.1)	1.5	1.4	9.7	4.0	2.1	2.2	-	-
$1,500 AND UNDER $1,550	-	3.6	6.0	8.1	1.4	1.4	1.6	6.8	6.2	4.2	.7	-	-
$1,550 AND UNDER $1,600	-	4.3	4.7	7.1	1.4	2.9	3.2	4.7	7.6	-	.1	-	-
$1,600 AND UNDER $1,650	-	1.5	3.8	8.1	2.7	3.1	1.6	4.2	6.7	7.2	2.1	-	-
$1,650 AND UNDER $1,700	-	1.2	3.3	8.7	3.7	-	1.1	1.7	9.5	4.2	2.6	-	-
$1,700 AND UNDER $1,750	-	(1.2)	2.6	7.0	3.6	-	1.2	2.4	8.0	20.4	4.4	-	-
$1,750 AND UNDER $1,800	-	-	2.3	7.0	3.9	-	.6	1.7	8.4	1.0	9.2	-	-
$1,800 AND UNDER $1,850	-	-	2.7	6.3	5.6	-	3.2	1.9	5.3	10.7	7.9	(1.2)	-
$1,850 AND UNDER $1,900	-	-	1.0	4.0	5.0	-	(1.4)	1.0	5.3	4.2	1.3	1.7	-
$1,900 AND UNDER $1,950	-	-	(1.8)	4.4	6.1	-	-	1.3	5.8	13.0	9.9	.4	-
$1,950 AND UNDER $2,000	-	-	-	4.2	6.2	-	-	1.4	5.9	1.8	7.3	5.0	-
$2,000 AND UNDER $2,050	-	-	-	2.3	5.0	-	-	(2.3)	5.4	.5	2.2	1.4	-
$2,050 AND UNDER $2,100	-	-	-	3.5	6.4	-	-	-	4.4	4.6	6.6	2.0	(0.3)
$2,100 AND UNDER $2,150	-	-	-	1.8	6.5	-	-	-	2.1	9.7	3.7	1.2	1.1
$2,150 AND UNDER $2,200	-	-	-	1.3	5.5	-	-	-	2.3	.4	8.0	1.7	-
$2,200 AND UNDER $2,250	-	-	-	(3.7)	7.4	-	-	-	1.9	1.9	6.8	6.9	.3
$2,250 AND UNDER $2,300	-	-	-	-	4.0	-	-	-	1.4	.7	9.8	6.1	4.4
$2,300 AND UNDER $2,350	-	-	-	-	4.0	-	-	-	1.2	2.5	1.9	2.0	2.2
$2,350 AND UNDER $2,400	-	-	-	-	3.0	-	-	-	(3.8)	1.2	2.0	2.8	.6
$2,400 AND UNDER $2,450	-	-	-	-	2.7	-	-	-	-	.5	3.7	3.4	.3
$2,450 AND UNDER $2,500	-	-	-	-	3.8	-	-	-	-	.4	4.0	8.2	1.9
$2,500 AND UNDER $2,600	-	-	-	-	3.5	-	-	-	-	1.8	.6	11.5	7.5
$2,600 AND UNDER $2,700	-	-	-	-	1.9	-	-	-	-	1.1	2.2	8.1	5.0
$2,700 AND UNDER $2,800	-	-	-	-	2.6	-	-	-	-	1.6	4.0	4.1	5.8
$2,800 AND UNDER $2,900	-	-	-	-	1.3	-	-	-	-	-	.5	6.4	1.9
$2,900 AND UNDER $3,000	-	-	-	-	(0.8)	-	-	-	-	-	.7	8.8	9.7
$3,000 AND UNDER $3,100	-	-	-	-	-	-	-	-	-	-	.4	9.2	16.9
$3,100 AND UNDER $3,200	-	-	-	-	-	-	-	-	-	-	.3	3.3	5.6
$3,200 AND UNDER $3,300	-	-	-	-	-	-	-	-	-	-	1.3	.4	10.6
$3,300 AND UNDER $3,400	-	-	-	-	-	-	-	-	-	-	-	1.9	3.9
$3,400 AND UNDER $3,500	-	-	-	-	-	-	-	-	-	-	-	.9	3.8
$3,500 AND UNDER $3,600	-	-	-	-	-	-	-	-	-	-	-	.3	6.7
$3,600 AND UNDER $3,700	-	-	-	-	-	-	-	-	-	-	-	3.9	1.4
$3,700 AND UNDER $3,800	-	-	-	-	-	-	-	-	-	-	-	-	1.1
$3,800 AND UNDER $3,900	-	-	-	-	-	-	-	-	-	-	-	1.8	4.7
$3,900 AND UNDER $4,000	-	-	-	-	-	-	-	-	-	-	-	-	.8
$4,000 AND UNDER $4,100	-	-	-	-	-	-	-	-	-	-	-	-	.3
$4,100 AND OVER	-	-	-	-	-	-	-	-	-	-	-	-	3.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	8,101	15,271	35,169	22,227	8,465	1,539	2,903	5,612	3,646	548	1,197	782	360
AVERAGE MONTHLY SALARY	$1,013	$1,219	$1,379	$1,697	$2,087	$1,047	$1,259	$1,426	$1,796	$1,880	$2,110	$2,410	$3,066

See footnote at end of table.

Table 4. Employment distribution by salary: Professional and administrative occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Attorneys					
	I	II	III	IV	V	VI
$975 AND UNDER $1,000	1.6	-	-	-	-	-
$1,000 AND UNDER $1,050	3.9	-	-	-	-	-
$1,050 AND UNDER $1,100	6.1	(1.6)	-	-	-	-
$1,100 AND UNDER $1,150	8.9	1.[illegible]	-	-	-	-
$1,150 AND UNDER $1,200	8.2	.8	-	-	-	-
$1,200 AND UNDER $1,250	10.2	1.2	-	-	-	-
$1,250 AND UNDER $1,300	10.8	3.9	-	-	-	-
$1,300 AND UNDER $1,350	13.2	2.8	-	-	-	-
$1,350 AND UNDER $1,400	5.4	4.5	-	-	-	-
$1,400 AND UNDER $1,450	5.1	5.7	-	-	-	-
$1,450 AND UNDER $1,500	5.9	8.3	(8.6)	-	-	-
$1,500 AND UNDER $1,550	4.9	7.2	1.2	-	-	-
$1,550 AND UNDER $1,600	1.4	6.2	1.4	-	-	-
$1,600 AND UNDER $1,650	2.3	7.8	.9	-	-	-
$1,650 AND UNDER $1,700	5.2	11.1	5.1	(1.1)	-	-
$1,700 AND UNDER $1,750	2.3	4.8	3.7	1.1	-	-
$1,750 AND UNDER $1,800	.9	5.1	1.9	1.1	-	-
$1,800 AND UNDER $1,850	1.8	3.3	7.2	.7	-	-
$1,850 AND UNDER $1,900	1.2	2.3	4.4	1.1	-	-
$1,900 AND UNDER $1,950	(1.5)	3.2	4.1	2.3	-	-
$1,950 AND UNDER $2,000	-	2.4	3.7	.8	-	-
$2,000 AND UNDER $2,050	-	1.1	4.1	1.9	-	-
$2,050 AND UNDER $2,100	-	2.3	10.5	2.1	-	-
$2,100 AND UNDER $2,150	-	1.4	3.3	2.1	-	-
$2,150 AND UNDER $2,200	-	1.2	3.3	3.1	-	-
$2,200 AND UNDER $2,250	-	1.7	3.3	3.3	-	-
$2,250 AND UNDER $2,300	-	1.0	6.3	4.5	-	-
$2,300 AND UNDER $2,350	-	1.3	3.7	3.3	-	-
$2,350 AND UNDER $2,400	-	(2.2)	4.6	2.1	-	-
$2,400 AND UNDER $2,450	-	-	2.4	4.2	(3.3)	-
$2,450 AND UNDER $2,500	-	-	3.1	7.6	2.4	-
$2,500 AND UNDER $2,600	-	-	2.8	11.8	3.1	-
$2,600 AND UNDER $2,700	-	-	3.2	7.7	3.7	-
$2,700 AND UNDER $2,800	-	-	1.8	7.8	6.4	(3.6)
$2,800 AND UNDER $2,900	-	-	1.8	6.8	3.6	1.9
$2,900 AND UNDER $3,000	-	-	(2.1)	7.6	10.7	2.8
$3,000 AND UNDER $3,100	-	-	-	4.7	10.3	3.9
$3,100 AND UNDER $3,200	-	-	-	2.4	7.7	3.3
$3,200 AND UNDER $3,300	-	-	-	2.8	8.3	4.3
$3,300 AND UNDER $3,400	-	-	-	3.1	3.2	2.8
$3,400 AND UNDER $3,500	-	-	-	1.8	3.2	4.4
$3,500 AND UNDER $3,600	-	-	-	1.8	6.1	4.3
$3,600 AND UNDER $3,700	-	-	-	(1.9)	3.3	6.3
$3,700 AND UNDER $3,800	-	-	-	-	2.4	3.5
$3,800 AND UNDER $3,900	-	-	-	-	2.8	3.7
$3,900 AND UNDER $4,000	-	-	-	-	4.3	3.6
$4,000 AND UNDER $4,100	-	-	-	-	1.8	12.0
$4,100 AND UNDER $4,200	-	-	-	-	2.2	3.7
$4,200 AND UNDER $4,300	-	-	-	-	4.3	4.6
$4,300 AND UNDER $4,400	-	-	-	-	.4	3.1
$4,400 AND UNDER $4,500	-	-	-	-	1.7	3.6
$4,500 AND UNDER $4,600	-	-	-	-	(2.2)	1.8
$4,600 AND UNDER $4,700	-	-	-	-	-	2.3
$4,700 AND UNDER $4,800	-	-	-	-	-	2.6
$4,800 AND UNDER $4,900	-	-	-	-	-	.6
$4,900 AND UNDER $5,000	-	-	-	-	-	2.8
$5,000 AND OVER	-	-	-	-	-	4.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	1,286	1,929	2,584	2,975	1,891	632
AVERAGE MONTHLY SALARY	$1,536	$1,691	$2,122	$2,581	$3,236	$3,676

See footnote at end of table.

Table 4. Employment distribution by salary: Professional and administrative occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Buyers			
	I	II	III	IV
UNDER $675	0.4	-	-	-
$675 AND UNDER $700	1.0	-	-	-
$700 AND UNDER $725	.5	-	-	-
$725 AND UNDER $750	3.0	-	-	-
$750 AND UNDER $775	2.8	-	-	-
$775 AND UNDER $800	3.4	-	-	-
$800 AND UNDER $825	2.3	-	-	-
$825 AND UNDER $850	4.6	-	-	-
$850 AND UNDER $875	9.4	(3.0)	-	-
$875 AND UNDER $900	4.7	1.3	-	-
$900 AND UNDER $925	5.3	1.1	-	-
$925 AND UNDER $950	7.6	1.4	-	-
$950 AND UNDER $975	5.4	1.9	-	-
$975 AND UNDER $1,000	4.1	3.3	(0.7)	-
$1,000 AND UNDER $1,050	9.2	6.2	1.0	-
$1,050 AND UNDER $1,100	7.2	7.8	1.7	-
$1,100 AND UNDER $1,150	3.5	9.7	2.7	-
$1,150 AND UNDER $1,200	7.8	7.9	4.2	-
$1,200 AND UNDER $1,250	4.6	10.3	4.1	-
$1,250 AND UNDER $1,300	4.8	8.3	6.3	(1.5)
$1,300 AND UNDER $1,350	2.8	6.1	7.9	1.9
$1,350 AND UNDER $1,400	2.7	6.2	6.9	2.7
$1,400 AND UNDER $1,450	1.5	5.9	9.2	3.6
$1,450 AND UNDER $1,500	1.9	4.4	8.2	3.6
$1,500 AND UNDER $1,550	(2.6)	4.3	7.2	5.9
$1,550 AND UNDER $1,600	-	2.9	4.2	8.0
$1,600 AND UNDER $1,650	-	2.2	7.3	6.3
$1,650 AND UNDER $1,700	-	1.4	4.3	6.9
$1,700 AND UNDER $1,750	-	1.1	3.0	6.9
$1,750 AND UNDER $1,800	-	1.0	3.5	6.4
$1,800 AND UNDER $1,850	-	(2.5)	2.9	5.9
$1,850 AND UNDER $1,900	-	-	2.2	3.7
$1,900 AND UNDER $1,950	-	-	1.7	3.9
$1,950 AND UNDER $2,000	-	-	1.7	3.6
$2,000 AND UNDER $2,050	-	-	1.4	3.1
$2,050 AND UNDER $2,100	-	-	1.0	3.6
$2,100 AND UNDER $2,150	-	-	(2.7)	2.2
$2,150 AND UNDER $2,200	-	-	-	2.6
$2,200 AND UNDER $2,250	-	-	-	2.2
$2,250 AND UNDER $2,300	-	-	-	2.1
$2,300 AND OVER	-	-	-	10.4
TOTAL	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	9,239	14,913	16,233	9,632
AVERAGE MONTHLY SALARY	$1,029	$1,398	$1,982	$1,836

See footnote at end of table.

Table 4. Employment distribution by salary: Professional and administrative occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Job analysis			Directors of personnel			
	II	II'	IV	I	II	III	IV
$775 AND UNDER $800	1.3	-	-	-	-	-	-
$800 AND UNDER $825	-	-	-	-	-	-	-
$825 AND UNDER $850	2.9	-	-	-	-	-	-
$850 AND UNDER $875	3.3	(0.4)	-	-	-	-	-
$875 AND UNDER $900	.4	1.1	-	-	-	-	-
$900 AND UNDER $925	6.7	.9	-	-	-	-	-
$925 AND UNDER $950	3.8	-	-	-	-	-	-
$950 AND UNDER $975	1.7	2.0	-	-	-	-	-
$975 AND UNDER $1,000	3.8	.7	-	-	-	-	-
$1,000 AND UNDER $1,050	9.2	2.2	-	1.8	-	-	-
$1,050 AND UNDER $1,100	19.6	.5	-	1.0	-	-	-
$1,100 AND UNDER $1,150	12.5	3.8	-	3.8	-	-	-
$1,150 AND UNDER $1,200	4.6	3.2	-	-	-	-	-
$1,200 AND UNDER $1,250	4.6	11.5	(2.3)	3.0	-	-	-
$1,250 AND UNDER $1,300	3.3	11.6	1.2	3.6	-	-	-
$1,300 AND UNDER $1,350	6.7	9.0	1.6	2.1	-	-	-
$1,350 AND UNDER $1,400	7.9	5.9	3.9	8.7	(2.2)	-	-
$1,400 AND UNDER $1,450	2.9	6.5	9.3	4.6	1.7	-	-
$1,450 AND UNDER $1,500	1.7	4.1	3.0	8.1	4.7	-	-
$1,500 AND UNDER $1,550	2.1	7.9	9.5	11.6	3.9	-	-
$1,550 AND UNDER $1,600	1.3	4.7	7.4	6.7	4.8	-	-
$1,600 AND UNDER $1,650	(0.8)	5.9	4.9	3.5	3.6	(1.3)	-
$1,650 AND UNDER $1,700	-	2.9	8.6	7.5	1.2	2.5	-
$1,700 AND UNDER $1,750	-	4.1	7.7	12.1	10.2	3.4	-
$1,750 AND UNDER $1,800	-	2.5	9.3	4.8	6.1	2.8	-
$1,800 AND UNDER $1,850	-	2.7	4.8	3.7	4.2	4.5	-
$1,850 AND UNDER $1,900	-	1.1	4.9	-	4.5	1.4	-
$1,900 AND UNDER $1,950	-	3.0	8.6	4.1	9.1	3.3	-
$1,950 AND UNDER $2,000	-	(2.0)	3.2	2.[illegible]	7.4	4.5	(1.2)
$2,000 AND UNDER $2,050	-	-	9.8	1.8	4.6	2.4	1.2
$2,050 AND UNDER $2,100	-	-	1.9	.6	4.8	4.5	.9
$2,100 AND UNDER $2,150	-	-	2.5	.1	4.1	2.6	-
$2,150 AND UNDER $2,200	-	-	.9	-	2.1	2.1	-
$2,200 AND UNDER $2,250	-	-	1.8	1.7	3.6	3.7	.3
$2,250 AND UNDER $2,300	-	-	1.8	1.3	3.9	4.4	3.9
$2,300 AND UNDER $2,350	-	-	1.4	(0.6)	2.9	4.5	-
$2,350 AND UNDER $2,400	-	-	1.9	-	2.6	2.5	.9
$2,400 AND UNDER $2,450	-	-	(0.7)	-	1.3	3.3	2.7
$2,450 AND UNDER $2,500	-	-	-	-	1.5	4.1	2.1
$2,500 AND UNDER $2,600	-	-	-	-	2.1	5.6	2.4
$2,600 AND UNDER $2,700	-	-	-	-	1.9	5.0	3.3
$2,700 AND UNDER $2,800	-	-	-	-	.8	7.8	7.1
$2,800 AND UNDER $2,900	-	-	-	-	1.0	2.8	2.4
$2,900 AND UNDER $3,000	-	-	-	-	1.4	4.9	16.0
$3,000 AND UNDER $3,100	-	-	-	-	(2.7)	.9	3.8
$3,100 AND UNDER $3,200	-	-	-	-	-	1.1	13.9
$3,200 AND UNDER $3,300	-	-	-	-	-	4.8	.9
$3,300 AND UNDER $3,400	-	-	-	-	-	.3	6.5
$3,400 AND UNDER $3,500	-	-	-	-	-	1.8	9.6
$3,500 AND UNDER $3,600	-	-	-	-	-	.7	4.7
$3,600 AND UNDER $3,700	-	-	-	-	-	1.8	4.4
$3,700 AND UNDER $3,800	-	-	-	-	-	2.6	2.1
$3,800 AND UNDER $3,900	-	-	-	-	-	(8.5)	5.8
$3,900 AND UNDER $4,000	-	-	-	-	-	-	2.1
$4,000 AND UNDER $4,100	-	-	-	-	-	-	2.7
$4,100 AND UNDER $4,200	-	-	-	-	-	-	1.8
$4,200 AND OVER	-	-	-	-	-	-	2.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	240	950	969	1,150	2,230	1,036	338
AVERAGE MONTHLY SALARY	$1,151	$1,418	$1,742	$1,580	$1,[illegible]90	$2,432	$3,169

See footnote at end of table.

Table 4. Employment distribution by salary: Professional and administrative occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Chemists							
	I	II	III	IV	V	VI	VII	VIII
UNDER $725	2.7	-	-	-	-	-	-	-
$725 AND UNDER $750	1.8	-	-	-	-	-	-	-
$750 AND UNDER $775	1.6	.4	-	-	-	-	-	-
$775 AND UNDER $800	1.9	(1.2)	-	-	-	-	-	-
$800 AND UNDER $825	1.3	3.2	-	-	-	-	-	-
$825 AND UNDER $850	.3	.2	-	-	-	-	-	-
$850 AND UNDER $875	5.5	1.3	-	-	-	-	-	-
$875 AND UNDER $900	2.1	1.3	-	-	-	-	-	-
$900 AND UNDER $925	7.1	2.3	-	-	-	-	-	-
$925 AND UNDER $950	5.7	.4	-	-	-	-	-	-
$950 AND UNDER $975	5.3	1.2	-	-	-	-	-	-
$975 AND UNDER $1,000	4.4	2.5	(1.7)	-	-	-	-	-
$1,000 AND UNDER $1,050	8.7	8.2	2.0	-	-	-	-	-
$1,050 AND UNDER $1,100	9.1	8.8	1.4	-	-	-	-	-
$1,100 AND UNDER $1,150	6.5	10.2	3.4	-	-	-	-	-
$1,150 AND UNDER $1,200	7.3	10.5	2.9	-	-	-	-	-
$1,200 AND UNDER $1,250	8.9	9.3	6.6	-	-	-	-	-
$1,250 AND UNDER $1,300	6.5	8.1	6.1	(3.0)	-	-	-	-
$1,300 AND UNDER $1,350	6.1	7.3	7.6	1.6	-	-	-	-
$1,350 AND UNDER $1,400	3.4	7.3	9.6	2.9	-	-	-	-
$1,400 AND UNDER $1,450	1.4	4.6	7.8	2.4	-	-	-	-
$1,450 AND UNDER $1,500	1.6	3.9	9.5	4.6	(1.5)	-	-	-
$1,500 AND UNDER $1,550	(1.0)	2.5	7.6	3.8	1.1	-	-	-
$1,550 AND UNDER $1,600	-	2.3	7.0	6.0	1.3	-	-	-
$1,600 AND UNDER $1,650	-	1.8	5.5	5.8	1.4	-	-	-
$1,650 AND UNDER $1,700	-	1.1	4.5	5.7	1.3	-	-	-
$1,700 AND UNDER $1,750	-	(0.4)	3.9	8.0	2.9	-	-	-
$1,750 AND UNDER $1,800	-	-	3.3	8.4	2.2	-	-	-
$1,800 AND UNDER $1,850	-	-	2.9	7.1	4.2	-	-	-
$1,850 AND UNDER $1,900	-	-	2.2	4.8	5.1	-	-	-
$1,900 AND UNDER $1,950	-	-	1.8	5.6	4.9	-	-	-
$1,950 AND UNDER $2,000	-	-	1.0	4.8	6.3	(3.3)	-	-
$2,000 AND UNDER $2,050	-	-	(1.7)	5.2	4.5	3.8	-	-
$2,050 AND UNDER $2,100	-	-	-	3.8	6.5	1.7	-	-
$2,100 AND UNDER $2,150	-	-	-	3.5	5.5	4.5	-	-
$2,150 AND UNDER $2,200	-	-	-	2.7	6.2	2.4	(1.5)	-
$2,200 AND UNDER $2,250	-	-	-	2.4	5.9	5.8	1.9	-
$2,250 AND UNDER $2,300	-	-	-	3.0	5.1	3.9	.8	-
$2,300 AND UNDER $2,350	-	-	-	1.5	3.7	5.0	.9	-
$2,350 AND UNDER $2,400	-	-	-	.7	4.6	4.8	4.0	-
$2,400 AND UNDER $2,450	-	-	-	.6	3.8	6.3	3.4	-
$2,450 AND UNDER $2,500	-	-	-	1.0	3.2	8.0	2.7	(0.7)
$2,500 AND UNDER $2,600	-	-	-	(1.2)	5.9	11.1	6.2	2.3
$2,600 AND UNDER $2,700	-	-	-	-	4.3	9.8	5.5	1.1
$2,700 AND UNDER $2,800	-	-	-	-	2.8	9.4	9.7	1.6
$2,800 AND UNDER $2,900	-	-	-	-	2.4	9.3	7.6	2.3
$2,900 AND UNDER $3,000	-	-	-	-	1.4	4.6	8.2	2.1
$3,000 AND UNDER $3,100	-	-	-	-	1.0	3.7	10.9	8.7
$3,100 AND UNDER $3,200	-	-	-	-	(1.0)	2.1	9.1	3.9
$3,200 AND UNDER $3,300	-	-	-	-	-	1.6	6.7	8.2
$3,300 AND UNDER $3,400	-	-	-	-	-	.7	9.8	3.9
$3,400 AND UNDER $3,500	-	-	-	-	-	1.3	2.6	5.3
$3,500 AND UNDER $3,600	-	-	-	-	-	(1.6)	2.2	6.8
$3,600 AND UNDER $3,700	-	-	-	-	-	-	2.9	5.5
$3,700 AND UNDER $3,800	-	-	-	-	-	-	1.2	2.1
$3,800 AND UNDER $3,900	-	-	-	-	-	-	.6	13.5
$3,900 AND UNDER $4,000	-	-	-	-	-	-	1.0	5.3
$4,000 AND UNDER $4,100	-	-	-	-	-	-	.8	6.4
$4,100 AND UNDER $4,200	-	-	-	-	-	-	.4	3.9
$4,200 AND UNDER $4,300	-	-	-	-	-	-	.6	2.5
$4,300 AND UNDER $4,400	-	-	-	-	-	-	2.1	.7
$4,400 AND UNDER $4,500	-	-	-	-	-	-	(1.2)	1.6
$4,500 AND UNDER $4,600	-	-	-	-	-	-	-	.5
$4,600 AND UNDER $4,700	-	-	-	-	-	-	-	1.6
$4,700 AND UNDER $4,800	-	-	-	-	-	-	-	1.4
$4,800 AND UNDER $4,900	-	-	-	-	-	-	-	.5
$4,900 AND UNDER $5,000	-	-	-	-	-	-	-	1.4
$5,000 AND OVER	-	-	-	-	-	-	-	6.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	2,110	4,171	9,557	11,143	9,132	4,563	1,564	638
AVERAGE MONTHLY SALARY	$1,073	$1,203	$1,447	$1,806	$2,184	$2,544	$3,027	$3,720

See footnote at end of table.

Table 4. Employment distribution by salary: Professional and administrative occupations—Continued

(Percent distribution of employees in selected professional and administrative occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Engineers							
	I	II	III	IV	V	VI	VII	VIII
UNDER $975	2.7	-	-	-	-	-	-	-
$975 AND UNDER $1,000	1.6	(0.6)	-	-	-	-	-	-
$1,000 AND UNDER $1,050	3.7	1.0	-	-	-	-	-	-
$1,050 AND UNDER $1,100	9.6	2.0	-	-	-	-	-	-
$1,100 AND UNDER $1,150	14.4	[illegible]	(1.4)	-	-	-	-	-
$1,150 AND UNDER $1,200	16.0	7.7	1.5	-	-	-	-	-
$1,200 AND UNDER $1,250	14.8	11.4	3.0	-	-	-	-	-
$1,250 AND UNDER $1,300	11.1	13.9	3.9	-	-	-	-	-
$1,300 AND UNDER $1,350	8.7	12.3	6.4	(1.5)	-	-	-	-
$1,350 AND UNDER $1,400	7.1	11.7	7.8	1.6	-	-	-	-
$1,400 AND UNDER $1,450	4.3	10.9	8.5	2.1	-	-	-	-
$1,450 AND UNDER $1,500	2.9	7.8	9.8	3.2	-	-	-	-
$1,500 AND UNDER $1,550	1.3	5.3	10.2	4.1	-	-	-	-
$1,550 AND UNDER $1,600	(2.0)	4.2	8.3	5.0	(2.4)	-	-	-
$1,600 AND UNDER $1,650	-	2.7	7.0	6.1	1.3	-	-	-
$1,650 AND UNDER $1,700	-	2.0	6.9	7.2	1.6	-	-	-
$1,700 AND UNDER $1,750	-	(2.6)	5.6	7.9	2.6	-	-	-
$1,750 AND UNDER $1,800	-	-	5.0	7.7	3.7	-	-	-
$1,800 AND UNDER $1,850	-	-	3.8	7.6	4.4	(2.2)	-	-
$1,850 AND UNDER $1,900	-	-	3.5	7.1	5.5	1.0	-	-
$1,900 AND UNDER $1,950	-	-	3.3	6.8	6.3	1.5	-	-
$1,950 AND UNDER $2,000	-	-	1.9	5.7	6.3	3.3	-	-
$2,000 AND UNDER $2,050	-	-	(2.2)	5.3	7.0	3.7	-	-
$2,050 AND UNDER $2,100	-	-	-	4.5	7.2	4.1	(2.3)	-
$2,100 AND UNDER $2,150	-	-	-	3.9	6.8	4.2	2.7	-
$2,150 AND UNDER $2,200	-	-	-	2.9	6.6	5.2	3.3	-
$2,200 AND UNDER $2,250	-	-	-	2.9	6.2	5.1	3.0	-
$2,250 AND UNDER $2,300	-	-	-	2.1	5.0	5.6	3.7	-
$2,300 AND UNDER $2,350	-	-	-	1.9	4.6	6.2	3.7	(2.0)
$2,350 AND UNDER $2,400	-	-	-	1.1	4.0	6.1	3.7	1.0
$2,400 AND UNDER $2,450	-	-	-	(1.0)	3.6	5.8	3.5	1.0
$2,450 AND UNDER $2,500	-	-	-	-	3.2	5.7	4.5	1.0
$2,500 AND UNDER $2,600	-	-	-	-	4.8	9.9	9.1	4.9
$2,600 AND UNDER $2,700	-	-	-	-	3.0	7.9	8.7	7.8
$2,700 AND UNDER $2,800	-	-	-	-	2.0	6.9	9.3	9.6
$2,800 AND UNDER $2,900	-	-	-	-	(1.9)	4.8	8.7	8.4
$2,900 AND UNDER $3,000	-	-	-	-	-	4.1	8.0	7.9
$3,000 AND UNDER $3,100	-	-	-	-	-	2.4	5.6	6.8
$3,100 AND UNDER $3,200	-	-	-	-	-	1.6	4.9	6.9
$3,200 AND UNDER $3,300	-	-	-	-	-	1.2	5.1	7.[illegible]
$3,300 AND UNDER $3,400	-	-	-	-	-	(1.6)	2.7	6.3
$3,400 AND UNDER $3,500	-	-	-	-	-	-	2.6	6.5
$3,500 AND UNDER $3,600	-	-	-	-	-	-	1.7	3.9
$3,600 AND UNDER $3,700	-	-	-	-	-	-	1.8	4.1
$3,700 AND UNDER $3,800	-	-	-	-	-	-	(1.6)	3.3
$3,800 AND UNDER $3,900	-	-	-	-	-	-	-	1.8
$3,900 AND UNDER $4,000	-	-	-	-	-	-	-	2.6
$4,000 AND UNDER $4,100	-	-	-	-	-	-	-	2.1
$4,100 AND UNDER $4,200	-	-	-	-	-	-	-	1.3
$4,200 AND OVER	-	-	-	-	-	-	-	3.9
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	15,892	32,784	92,340	125,903	89,094	46,235	17,933	4,704
AVERAGE MONTHLY SALARY	$1,218	$1,352	$1,558	$1,839	$2,135	$2,448	$2,750	$3,172

[1] For scope of study, see table A-1 in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations. The percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

Table 5. Employment distribution by salary: Technical support occupations

(Percent distribution of employees in selected technical support occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Engineering technicians					Drafter-tracers	Drafters		
	I	II	III	IV	V		I	II	III
$450 AND UNDER $475	-	-	-	-	-	0.2	-	-	-
$475 AND UNDER $500	-	-	-	-	-	1.3	-	-	-
$500 AND UNDER $525	-	-	-	-	-	2.5	-	-	-
$525 AND UNDER $550	(0.3)	-	-	-	-	5.3	-	-	-
$550 AND UNDER $575	3.8	-	-	-	-	2.7	(2.0)	-	-
$575 AND UNDER $600	1.3	-	-	-	-	2.2	2.3	-	-
$600 AND UNDER $625	2.0	-	-	-	-	4.8	3.4	-	-
$625 AND UNDER $650	6.3	(0.7)	-	-	-	9.0	3.3	-	-
$650 AND UNDER $675	9.0	1.2	-	-	-	4.5	3.9	-	-
$675 AND UNDER $700	5.2	2.7	-	-	-	5.8	5.0	-	-
$700 AND UNDER $725	4.7	2.8	-	-	-	6.1	5.5	(2.8)	-
$725 AND UNDER $750	7.6	3.0	-	-	-	5.8	5.1	1.1	-
$750 AND UNDER $775	11.7	4.5	(1.3)	-	-	3.9	5.3	1.8	-
$775 AND UNDER $800	7.0	5.6	2.0	-	-	3.7	4.8	2.1	-
$800 AND UNDER $825	5.6	4.8	2.2	-	-	4.3	5.1	2.8	-
$825 AND UNDER $850	6.4	5.2	3.2	-	-	5.0	6.3	3.4	-
$850 AND UNDER $875	5.3	5.9	3.2	-	-	2.1	6.4	4.3	-
$875 AND UNDER $900	4.7	5.4	3.4	-	-	9.2	4.2	3.6	(3.2)
$900 AND UNDER $925	4.5	7.3	3.9	(2.3)	-	6.8	4.1	4.8	1.1
$925 AND UNDER $950	2.1	4.5	2.8	1.2	-	5.1	3.3	4.2	1.1
$950 AND UNDER $975	2.5	4.9	4.6	1.3	-	2.5	4.4	6.0	1.4
$975 AND UNDER $1,000	1.6	4.5	5.0	1.7	(0.7)	.7	2.2	5.9	2.2
$1,000 AND UNDER $1,050	3.2	9.1	9.6	5.3	1.3	1.1	3.9	9.9	5.9
$1,050 AND UNDER $1,100	3.3	8.7	8.2	6.4	1.9	2.7	4.0	8.1	6.4
$1,100 AND UNDER $1,150	2.4	5.5	10.9	8.1	2.8	1.1	4.1	6.6	7.1
$1,150 AND UNDER $1,200	1.5	3.7	9.8	9.4	4.4	1.1	2.3	6.9	8.3
$1,200 AND UNDER $1,250	(2.1)	3.5	7.9	10.7	5.7	(0.7)	3.1	5.1	7.4
$1,250 AND UNDER $1,300	-	1.6	9.2	10.2	6.7	-	1.0	4.7	7.4
$1,300 AND UNDER $1,350	-	1.2	4.1	12.0	9.8	-	(2.8)	5.5	7.9
$1,350 AND UNDER $1,400	-	1.0	3.7	8.7	10.9	-	-	3.3	8.2
$1,400 AND UNDER $1,450	-	(0.6)	1.5	6.7	11.3	-	-	2.0	6.3
$1,450 AND UNDER $1,500	-	-	1.0	4.3	9.9	-	-	1.5	5.0
$1,500 AND UNDER $1,550	-	-	(1.4)	3.7	8.5	-	-	1.5	4.4
$1,550 AND UNDER $1,600	-	-	-	2.9	9.3	-	-	(2.2)	2.7
$1,600 AND UNDER $1,650	-	-	-	1.3	5.7	-	-	-	2.5
$1,650 AND UNDER $1,700	-	-	-	(1.9)	5.2	-	-	-	1.7
$1,700 AND UNDER $1,750	-	-	-	-	4.0	-	-	-	1.6
$1,750 AND UNDER $1,800	-	-	-	-	2.2	-	-	-	1.5
$1,800 AND UNDER $1,850	-	-	-	-	2.0	-	-	-	1.4
$1,850 AND UNDER $1,900	-	-	-	-	(1.8)	-	-	-	1.0
$1,900 AND UNDER $1,950	-	-	-	-	-	-	-	-	.9
$1,950 AND UNDER $2,000	-	-	-	-	-	-	-	-	1.1
$2,000 AND UNDER $2,050	-	-	-	-	-	-	-	-	1.0
$2,050 AND OVER	-	-	-	-	-	-	-	-	1.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	3,142	15,033	25,056	28,460	18,327	4,090	18,140	31,418	29,568
AVERAGE MONTHLY SALARY	$811	$946	$1,096	$1,268	$1,436	$768	$863	$1,069	$1,319

See footnote at end of table.

Table 5. Employment distribution by salary: Technical support occupations—Continued

(Percent distribution of employees in selected technical support occupations by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Computer operators					
	I	II	III	IV	V	VI
UNDER $450	1.8	-	-	-	-	-
$450 AND UNDER $475	1.1	0.7	-	-	-	-
$475 AND UNDER $500	1.6	1.3	-	-	-	-
$500 AND UNDER $525	6.2	1.5	-	-	-	-
$525 AND UNDER $550	6.4	.8	-	-	-	-
$550 AND UNDER $575	8.7	2.9	(1.5)	-	-	-
$575 AND UNDER $600	7.5	3.4	1.2	-	-	-
$600 AND UNDER $625	12.6	4.6	2.2	-	-	-
$625 AND UNDER $650	8.2	4.6	1.9	(1.4)	-	-
$650 AND UNDER $675	10.7	8.5	3.8	1.2	-	-
$675 AND UNDER $700	7.4	5.6	5.1	1.1	-	-
$700 AND UNDER $725	5.0	7.0	5.4	1.4	-	-
$725 AND UNDER $750	2.9	4.7	6.0	1.6	-	-
$750 AND UNDER $775	4.2	7.6	5.4	2.4	-	-
$775 AND UNDER $800	1.8	5.2	5.8	2.0	(1.0)	-
$800 AND UNDER $825	1.6	4.8	4.9	2.8	1.6	-
$825 AND UNDER $850	1.9	4.7	6.0	3.6	2.8	-
$850 AND UNDER $875	1.1	4.5	7.0	4.1	1.6	3.3
$875 AND UNDER $900	1.0	3.6	4.0	3.7	1.0	.2
$900 AND UNDER $925	.9	3.5	4.9	4.7	2.9	1.6
$925 AND UNDER $950	1.3	3.7	4.3	5.6	4.3	.8
$950 AND UNDER $975	1.4	3.0	4.6	5.3	4.8	.3
$975 AND UNDER $1,000	.7	2.9	3.8	6.7	4.6	1.0
$1,000 AND UNDER $1,050	1.6	4.3	5.5	8.4	7.8	.2
$1,050 AND UNDER $1,100	1.0	2.0	3.9	7.8	8.7	1.0
$1,100 AND UNDER $1,150	(1.3)	1.6	3.3	6.9	8.0	3.6
$1,150 AND UNDER $1,200	-	.6	3.1	6.1	8.1	9.3
$1,200 AND UNDER $1,250	-	1.7	2.2	4.8	9.0	5.7
$1,250 AND UNDER $1,300	-	(0.9)	1.5	4.3	8.5	9.8
$1,300 AND UNDER $1,350	-	-	1.1	4.3	6.8	7.7
$1,350 AND UNDER $1,400	-	-	(1.6)	3.3	4.4	15.1
$1,400 AND UNDER $1,450	-	-	-	1.7	3.6	7.4
$1,450 AND UNDER $1,500	-	-	-	1.1	2.6	6.3
$1,500 AND UNDER $1,550	-	-	-	1.0	1.2	5.8
$1,550 AND UNDER $1,600	-	-	-	1.0	1.0	7.2
$1,600 AND UNDER $1,650	-	-	-	(1.6)	2.3	2.3
$1,650 AND UNDER $1,700	-	-	-	-	.6	4.8
$1,700 AND UNDER $1,750	-	-	-	-	.4	1.6
$1,750 AND UNDER $1,800	-	-	-	-	1.3	1.6
$1,800 AND UNDER $1,850	-	-	-	-	(1.3)	1.8
$1,850 AND OVER	-	-	-	-	-	1.2
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	4,890	8,889	25,636	16,251	3,775	1,008
AVERAGE MONTHLY SALARY	$665	$789	$877	$1,046	$1,175	$1,369

[1] For scope of study, see table A-1 in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

Table 6. Employment distribution by salary: Clerical occupations

(Percent distribution of employees in selected clerical occupations, by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Clerks, accounting		Clerks, file			Keypunch operators		Messengers
	I	II	I	II	III	I	II	
UNDER $375	-	-	0.5	-	-	-	-	-
$375 AND UNDER $400	-	-	4.0	1.0	-	-	-	(1.2)
$400 AND UNDER $425	(1.3)	-	8.4	4.3	0.3	0.5	-	4.0
$425 AND UNDER $450	2.5	-	16.3	5.7	1.2	1.2	-	5.4
$450 AND UNDER $475	3.4	-	14.6	9.1	1.8	2.1	-	7.6
$475 AND UNDER $500	5.3	-	13.4	10.9	2.5	3.3	(1.4)	10.5
$500 AND UNDER $525	6.9	(1.5)	12.4	13.9	4.4	6.9	1.4	10.2
$525 AND UNDER $550	9.8	1.3	7.0	8.1	4.0	7.3	2.4	9.7
$550 AND UNDER $575	7.5	2.1	7.1	6.5	3.7	10.8	3.5	8.5
$575 AND UNDER $600	7.1	2.6	5.4	5.9	5.2	6.2	4.2	6.5
$600 AND UNDER $625	7.1	3.7	2.5	5.4	4.9	7.5	5.6	4.9
$625 AND UNDER $650	5.2	4.0	2.2	5.2	6.8	6.8	6.8	5.2
$650 AND UNDER $675	7.0	5.9	1.2	4.8	6.7	7.9	6.8	3.7
$675 AND UNDER $700	5.1	5.5	(4.9)	3.2	5.6	5.7	7.1	3.3
$700 AND UNDER $725	4.5	5.3	-	2.7	6.7	4.7	6.2	2.1
$725 AND UNDER $750	3.8	5.3	-	1.5	3.3	3.7	5.9	1.8
$750 AND UNDER $775	3.7	5.1	-	1.4	2.9	3.4	4.2	2.5
$775 AND UNDER $800	2.9	4.8	-	1.6	3.1	2.6	5.2	1.5
$800 AND UNDER $825	2.0	4.0	-	1.8	2.8	1.9	4.3	1.5
$825 AND UNDER $850	2.1	3.9	-	.9	2.2	2.3	4.9	1.2
$850 AND UNDER $875	1.8	4.1	-	1.2	3.8	1.6	3.5	1.0
$875 AND UNDER $900	2.1	3.0	-	1.0	2.1	1.4	3.4	.7
$900 AND UNDER $925	1.9	2.9	-	.8	2.7	1.6	2.3	1.2
$925 AND UNDER $950	2.3	3.7	-	1.3	2.4	1.2	2.0	.8
$950 AND UNDER $975	2.0	3.2	-	.3	1.7	1.2	2.6	1.3
$975 AND UNDER $1,000	1.3	2.7	-	.4	2.3	.4	1.3	(3.6)
$1,000 AND UNDER $1,050	1.4	4.1	-	1.7	2.6	1.6	3.0	-
$1,050 AND UNDER $1,100	1.4	3.4	-	(2.4)	2.4	1.3	3.4	-
$1,100 AND UNDER $1,150	(2.9)	3.4	-	-	3.7	1.2	2.7	-
$1,150 AND UNDER $1,200	-	4.0	-	-	3.9	(1.5)	1.3	-
$1,200 AND UNDER $1,250	-	4.4	-	-	1.8	-	1.2	-
$1,250 AND UNDER $1,300	-	1.7	-	-	(1.1)	-	(1.5)	-
$1,300 AND UNDER $1,350	-	1.5	-	-	-	-	-	-
$1,350 AND UNDER $1,400	-	1.1	-	-	-	-	-	-
$1,400 AND OVER	-	(1.6)	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	96,181	82,419	29,073	16,834	5,446	63,325	46,523	21,949
AVERAGE MONTHLY SALARY	$678	$866	$506	$597	$757	$670	$778	$597

See footnote at end of table.

Table 6. Employment distribution by salary: Clerical occupations—Continued

(Percent distribution of employees in selected clerical occupations, by monthly salary, United States except Alaska and Hawaii,[1] March 1977)

Monthly salary	Secretaries					Stenographers, general	Stenographers, senior	Typists	
	I	II	III	IV	V			I	II
$375 AND UNDER $400	-	-	-	-	-	-	-	0.8	-
$400 AND UNDER $425	-	-	-	-	-	-	-	1.2	-
$425 AND UNDER $450	-	-	-	-	-	-	-	4.0	0.2
$450 AND UNDER $475	(1.1)	-	-	-	-	(1.4)	-	5.8	1.2
$475 AND UNDER $500	1.4	-	-	-	-	2.6	-	11.2	2.5
$500 AND UNDER $525	1.8	-	-	-	-	3.0	-	10.6	4.0
$525 AND UNDER $550	2.2	(1.9)	-	-	-	3.9	(1.4)	8.3	5.6
$550 AND UNDER $575	2.9	1.2	-	-	-	4.8	1.5	9.9	7.4
$575 AND UNDER $600	3.6	2.3	(1.5)	-	-	6.2	1.9	8.2	7.3
$600 AND UNDER $625	4.9	3.1	1.1	-	-	6.3	3.0	8.0	7.2
$625 AND UNDER $650	4.9	3.7	1.1	(2.5)	(1.2)	6.0	3.1	5.7	7.3
$650 AND UNDER $675	6.5	5.0	2.8	2.0	1.7	7.0	5.6	5.1	7.2
$675 AND UNDER $700	6.9	4.5	2.7	1.0	.7	5.6	4.5	3.6	5.6
$700 AND UNDER $725	6.1	5.7	3.0	2.5	.8	4.8	6.6	3.3	5.3
$725 AND UNDER $750	6.2	5.7	3.8	2.4	.7	4.5	6.1	2.0	5.0
$750 AND UNDER $775	6.3	6.2	4.5	2.4	1.7	4.1	6.0	1.6	4.2
$775 AND UNDER $800	5.6	5.9	5.0	2.9	1.7	3.7	5.3	1.5	3.7
$800 AND UNDER $825	6.1	6.4	6.0	3.5	1.9	3.6	5.5	1.6	2.9
$825 AND UNDER $850	5.0	6.1	6.1	4.7	2.5	4.6	6.0	1.5	3.7
$850 AND UNDER $875	4.5	5.5	5.9	4.9	2.9	2.8	4.3	1.1	2.1
$875 AND UNDER $900	2.9	4.8	5.5	4.2	2.7	4.2	3.5	(5.1)	3.7
$900 AND UNDER $925	2.8	4.5	5.5	4.4	3.3	3.2	3.2	-	1.8
$925 AND UNDER $950	2.8	3.1	4.7	4.6	2.9	2.3	4.7	-	1.9
$950 AND UNDER $975	2.2	2.8	4.6	4.3	5.2	1.7	4.0	-	2.1
$975 AND UNDER $1,000	1.9	2.9	4.7	4.6	2.8	1.3	3.0	-	1.0
$1,000 AND UNDER $1,050	2.9	5.1	7.0	8.8	8.5	2.4	6.1	-	1.5
$1,050 AND UNDER $1,100	2.7	3.8	6.0	8.1	8.2	2.7	3.8	-	1.5
$1,100 AND UNDER $1,150	3.0	3.2	4.6	7.1	7.4	4.3	4.0	-	2.3
$1,150 AND UNDER $1,200	1.8	2.4	4.0	6.6	8.3	1.9	2.5	-	(1.9)
$1,200 AND UNDER $1,250	(1.2)	1.5	3.2	4.6	6.3	(1.4)	2.2	-	-
$1,250 AND UNDER $1,300	-	(2.8)	1.8	3.7	6.2	-	1.5	-	-
$1,300 AND UNDER $1,350	-	-	2.2	3.1	5.4	-	(0.5)	-	-
$1,350 AND UNDER $1,400	-	-	(2.6)	1.9	4.2	-	-	-	-
$1,400 AND UNDER $1,450	-	-	-	1.8	4.3	-	-	-	-
$1,450 AND UNDER $1,500	-	-	-	1.1	2.4	-	-	-	-
$1,500 AND UNDER $1,550	-	-	-	1.1	1.3	-	-	-	-
$1,550 AND UNDER $1,600	-	-	-	(1.1)	1.4	-	-	-	-
$1,600 AND UNDER $1,650	-	-	-	-	.8	-	-	-	-
$1,650 AND UNDER $1,700	-	-	-	-	.5	-	-	-	-
$1,700 AND OVER	-	-	-	-	2.0	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NUMBER OF EMPLOYEES	41,782	78,726	85,480	54,097	19,589	33,228	38,119	48,651	34,974
AVERAGE MONTHLY SALARY	$777	$842	$930	$1,012	$1,117	$757	$848	$600	$715

[1] For scope of study, see table A-1 in appendix A.

NOTE: To avoid showing small proportions of employees scattered at or near the extremes of the distributions for some occupations, the percentages of employees in these intervals have been accumulated and are shown in the interval above or below the extreme interval containing at least 1 percent. The percentages representing these employees are shown in parentheses. Because of rounding, sums of individual items may not equal 100.

Table 7. Occupational employment distribution: By industry division

(Percent distribution of employees in selected professional, administrative, technical, and clerical occupations[1] by industry division,[2] United States except Alaska and Hawaii, March 1977)

Occupation	Mining	Construction	Manufacturing	Public[3] utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected[4] services
PROFESSIONAL AND ADMINISTRATIVE								
ACCOUNTANTS	(5)	(5)	64	13	5	(5)	8	(5)
AUDITORS	(5)	(5)	39	16	(5)	7	32	(5)
CHIEF ACCOUNTANTS	4	(5)	68	7	6	(5)	6	5
ATTORNEYS	(5)	(5)	30	19	(5)	(5)	42	(5)
BUYERS	(5)	(5)	83	6	(5)	(5)	(5)	(5)
JOB ANALYSTS	(5)	(5)	65	8	(5)	–	21	4
DIRECTORS OF PERSONNEL	(5)	(5)	70	6	(5)	5	10	(5)
CHEMISTS	(5)	(5)	86	(5)	(5)	(5)	(5)	7
ENGINEERS	(5)	4	69	12	(5)	(5)	(5)	13
TECHNICAL SUPPORT								
ENGINEERING TECHNICIANS	(5)	(5)	77	7	(5)	(5)	(5)	14
DRAFTERS	(5)	7	64	11	(5)	(5)	(5)	13
COMPUTER OPERATORS	(5)	(5)	40	11	7	6	25	10
CLERICAL								
CLERKS, ACCOUNTING	(5)	(5)	42	14	9	13	17	(5)
CLERKS, FILE	(5)	(5)	20	6	4	5	63	(5)
KEYPUNCH OPERATORS	(5)	(5)	40	10	9	8	21	9
MESSENGERS	(5)	(5)	34	13	4	5	38	5
SECRETARIES	(5)	(5)	52	10	6	4	22	5
STENOGRAPHERS	(5)	(5)	47	21	4	(5)	19	4
TYPISTS	(5)	(5)	37	9	(5)	4	42	4

[1] Each occupation includes the work levels shown in table 1.

[2] For scope of study, see table A-1 in appendix A.

[3] Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

[4] Limited to engineering, architectural, and surveying services; commercially operated research, development and testing laboratories; credit reporting and collection agencies; computer and data processing services; management, consulting and public relations services; and noncommercial educational, scientific, and research organizations.

[5] Less than 4 percent.

Table 8. Relative salary levels: Occupation by industry division

(Relative salary levels for selected professional, administrative, technical, and clerical occupations[1] by industry division,[2] United States except Alaska and Hawaii, March 1977)

(Average salary for each occupation in all industries = 100)

Occupation	Mining	Construction	Manufacturing	Public[3] utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected[4] services
PROFESSIONAL AND ADMINISTRATIVE								
ACCOUNTANTS	108	99	100	105	97	95	94	93
AUDITORS	(5)	95	105	106	105	94	92	100
CHIEF ACCOUNTANTS	112	(5)	100	103	(5)	99	97	102
ATTORNEYS	108	(5)	107	99	(5)	98	94	100
BUYERS	107	100	100	106	100	109	(5)	94
JOB ANALYSTS	(5)	(5)	102	112	(5)	(5)	85	103
DIRECTORS OF PERSONNEL	117	(5)	100	104	(5)	100	(5)	(5)
CHEMISTS	106	–	100	(5)	(5)	(5)	(5)	91
ENGINEERS	104	100	99	104	(5)	(5)	(5)	99
TECHNICAL SUPPORT								
ENGINEERING TECHNICIANS	110	(5)	98	114	(5)	(5)	99	103
DRAFTERS	109	107	98	108	92	(5)	84	95
COMPUTER OPERATORS	103	(5)	105	115	100	95	90	93
CLERICAL								
CLERKS, ACCOUNTING	124	97	102	124	94	88	85	92
CLERKS, FILE	113	106	109	141	99	106	91	109
KEYPUNCH OPERATORS	112	102	104	123	97	95	89	89
MESSENGERS	100	94	104	129	101	94	87	98
SECRETARIES	105	94	103	113	98	89	90	101
STENOGRAPHERS	103	96	101	114	103	90	83	91
TYPISTS	109	98	107	124	106	103	88	100

[1] Each occupation includes the work levels shown in table 1. In computing relative salary levels for each occupation by industry division, the total employment in each work level in all industries surveyed was used as a constant employment weight to eliminate the effect of differences in the proportion of employment in various work levels within each occupation.

[2] For scope of study, see table A-1 in appendix A.

[3] Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

[4] Limited to engineering, architectural, and surveying services; commercially operated research, development and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, and public relations services; and noncommercial educational, scientific, and research organizations.

[5] Insufficient employment in 1 work level or more to warrant separate presentation of data.

Table 9. Average weekly hours: Occupation by industry division

(Average standard weekly hours[1] for employees in selected professional, administrative, technical, and clerical occupations[2] by industry division,[3] United States except Alaska and Hawaii, March 1977)

Occupation	Mining	Construction	Manufacturing	Public[4] utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Selected[5] services
PROFESSIONAL AND ADMINISTRATIVE								
ACCOUNTANTS	39.0	40.0	39.5	39.5	39.5	39.5	38.0	39.5
AUDITORS	(6)	40.0	39.0	39.5	40.0	39.5	38.0	38.5
CHIEF ACCOUNTANTS	40.0	(6)	39.5	39.5	(6)	39.5	38.0	39.5
ATTORNEYS	39.5	(6)	38.5	39.5	(6)	39.0	38.0	39.0
BUYERS	39.5	40.0	40.0	39.5	39.5	39.5	(6)	39.5
JOB ANALYSTS	(6)	(6)	39.0	39.5	(6)	(6)	38.0	39.5
DIRECTORS OF PERSONNEL	39.5	(6)	40.0	40.0	(6)	40.0	(6)	(6)
CHEMISTS	39.0	(6)	39.5	(6)	(6)	(6)	(6)	40.0
ENGINEERS	40.0	40.0	40.0	39.5	(6)	(6)	(6)	39.9
TECHNICAL SUPPORT								
ENGINEERING TECHNICIANS	40.0	(6)	40.0	39.5	(6)	(6)	36.5	39.5
DRAFTERS	40.0	40.0	40.0	39.5	39.5	(6)	37.0	40.0
COMPUTER OPERATORS	39.5	(6)	39.5	39.0	39.5	39.5	38.0	39.5
CLERICAL								
CLERKS, ACCOUNTING	39.5	39.5	39.5	39.5	40.0	39.5	38.0	39.0
CLERKS, FILE	40.0	40.0	39.5	39.5	39.5	39.0	38.0	39.0
KEYPUNCH OPERATORS	39.5	39.5	39.5	39.5	39.5	39.5	38.0	39.5
MESSENGERS	40.0	39.5	39.0	39.0	39.0	39.0	37.5	39.0
SECRETARIES	37.5	39.5	39.0	39.0	39.5	39.0	38.0	39.5
STENOGRAPHERS	39.5	39.5	39.5	39.5	40.0	39.5	38.0	39.0
TYPISTS	39.5	40.0	39.5	39.0	39.5	39.0	37.5	39.5

[1] Based on the standard workweek for which employees receive their regular straight-time salary. If standard hours were not available, the standard hours applicable for a majority of the office work force in the establishment were used. The average for each job category was rounded to the nearest half hour.

[2] Each occupation includes the work levels shown in table 1.

[3] For scope of study, see table A-1 in appendix A.

[4] Transportation (except U.S. Postal Service), communications, electric, gas, and sanitary services.

[5] Limited to engineering, architectural, and surveying services; commercially operated research, development and testing laboratories; advertising; credit reporting and collection agencies; computer and data processing services; management, consulting, and public relations services; and noncommercial educational, scientific, and research organizations.

[6] Insufficient employment in 1 work level or more to warrant separate presentation of data.

Appendix A. Scope and Method of Survey

Scope of survey

The survey relates to establishments in the United States, except Alaska and Hawaii, in the following industires: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services (except the U.S. Postal Service); wholesale trade; retail trade; finance, insurance, and real estate; and selected services. Excluded are establishments employing fewer than the minimum number of workers, as indicated for each industry division in table A-1, at the time of reference of the universe data (March 1975). The variable minimum employment size, which was first adopted in the 1966 survey, more nearly equalizes the white-collar employment of establishments among the various industry divisions. Establishments within the scope of the survey at the time of universe preparation are included even if they employed fewer than the specified minimum number of workers when visited for the survey. However, establishments found to be outside of the industrial scope of the survey during the visit are excluded.

The estimated number of establishments and the total employment within the scope of this survey, and within the sample actually studied, are shown for each major industry division in table A-1. These estimates also are shown separately for establishments employing 2,500 workers or more and for those located in Standard Metropolitan Statistical Areas (SMSA's).[1]

Timing of survey and method of collection

Data collection was planned so that the data would reflect an average reference peirod of March 1977.[2]

Data were obtained by Bureau field economists who visited a nationwide sample of representative establishments within the scope of the survey between January and May. Employees were classified according to occupation and level, with the assistance of company officials, on the basis of the BLS job definitions which appear in appendix C. In comparing actual duties and responsibilities of employees with those enumerated in the survey definitions, extensive use was made of company occupational descriptions, organization charts, and other personnel records.

Sampling and estimating procedures

All establishments within the scope of the survey were stratified by major industry group and total employment (size-class) and then arranged by geographic region. A nationwide sample of approximately 4,060 establishments (not necessarily companies) was systematically selected.[3] Sampling rates varied by major industry group and by size-class. Industries which employed more of the employees in the survey occupations were sampled more heavily and a greater proportion of large than of small establishments was selected. In combining the data, each establishment was weighted according to the inverse of its probability of selection so that unbiased estimates of universe totals were generated. To illustrate, in strata where 1 establishment out of 4 was selected, each sample establishment was given a weight of 4, thus representing itself plus three others. If data were not provided by an original sample member, weights of sample establishments randomly selected from responding sample establishments within the same stratum were adjusted to account for the missing establishment. No adjustment was made for establishments which were out of business or out of scope of the survey at the time of data collection. In the March 1977 survey, data were not available from about 10 percent of the sample members (representing 2,311,000 employees in the total universe); an additional 3 percent (representing 450,000 employees) were either out of business or out of the scope of the survey.

Nature of data collected and reported

Reported salaries are standard salaries paid for standard work schedules, i.e., the straight-time salary corresponding

[1] The metropolitan area data relate to all 276 SMSA's (within the 48 States surveyed) as revised through October 1975 by the U.S. Office of Management and Budget. Earlier surveys represented SMSA's ranging in number from 188 for surveys before 1963 to 263 in the 1975 and 1976 surveys.

[2] The March payroll period has been used since the 1972 survey. The 1967 through 1971 surveys had a June reference period for all occupations. Before the 1967 study, the average reference period was February for clerical and drafting jobs, and March for all other occupations. Until 1963, reports listed "Winter" as the reference period. From 1963 through 1966, the more specific designation "February-March" was used.

[3] A few of the largest employers, together employing approximately 1,160,000 workers, gave data on a companywide basis. These companies were eliminated from the universe to which the procedure described applies. The sample count includes the establishments of these companies within the scope of the survey.

Table A-1. Number of establishments and workers within scope of survey and number studied, by industry division, United States, March 1977

Industry division	Minimum employment in establishments in scope of survey	Within scope of survey[2]			Studied		
		Number of establishments	Workers in establishments		Number of establishments	Workers in establishments	
			Total	Professional, administrative, supervisory, and clerical[3]		Total	Professional, administrative, supervisory, and clerical[3]
United States – All industries[1]	–	35,719	21,178,053	8,821,128	3,547	6,847,481	3,086,243
Manufacturing	[4] 100–250	18,155	12,378,811	3,893,886	1,799	4,031,583	1,456,667
Nonmanufacturing:							
Mining	250	429	305,390	94,485	86	94,158	27,043
Construction	250	588	243,392	87,151	77	66,395	35,084
Transportation, communication, electric, gas, and sanitary services	[5] 100–250	3,726	2,603,734	1,297,069	487	1,165,850	616,259
Wholesale trade	100	3,616	777,252	422,523	214	59,058	35,742
Retail trade	250	2,887	2,552,964	828,320	326	727,317	252,197
Finance, insurance, and real estate	100	4,968	1,864,827	1,818,059	405	528,959	521,410
Selected services[6]	100	1,350	451,683	379,635	153	174,161	141,841
Metropolitan areas – All industries[7]	–	28,189	17,553,863	7,977,947	2,980	6,319,598	2,945,955
Manufacturing	[4] 100–250	12,782	9,504,018	3,330,247	1,399	3,632,457	1,361,780
Nonmanufacturing:							
Mining	250	218	153,514	57,443	42	48,678	14,851
Construction	250	528	194,219	78,011	63	50,062	31,770
Transportation, communication, electric, gas, and sanitary services	[5] 100–250	2,615	2,243,489	1,165,323	416	1,116,773	599,027
Wholesale trade	100	3,330	734,323	408,474	205	57,505	35,055
Retail trade	250	2,669	2,476,342	806,763	315	723,119	250,639
Finance, insurance, and real estate	100	4,743	1,809,731	1,762,963	392	522,133	514,584
Selected services[6]	100	1,304	438,227	368,723	148	168,871	138,249
Establishments employing 2,500 workers or more – All industries	–	1,026	6,510,497	2,894,282	732	4,976,801	2,269,881
Manufacturing	–	536	3,891,832	1,460,861	415	3,064,484	1,151,592

[1] As defined in the 1972 edition of the *Standard Industrial Classification Manual*, U.S. Office of Management and Budget.

[2] Establishments with total employment at or above the minimum limitation indicated in the first column; excludes Alaska and Hawaii.

[3] Includes executive, administrative, professional, supervisory, and clerical employees, but excludes technicians, drafters, and sales personnel.

[4] Minimum employment size was 100 for chemical and allied products; petroleum refining and related industries; machinery, except electrical; electrical machinery, equipment, and supplies; transportation equipment; and instruments and related products. Minimum size was 250 in all other manufacturing industries.

[5] Minimum employment size was 100 for railroad transportation; local and suburban transit; deep sea foreign and domestic transportation; air transportation; communications, electric, gas, and sanitary services; and pipelines and 250 for all other transportation industries. U.S. Postal Service is excluded from the survey.

[6] Limited to engineering and architectural services; research and development and commercial testing laboratories; advertising; credit reporting and collection; management and public relations; and noncommercial research organizations.

[7] Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through October 1975 by the U.S. Office of Management and Budget.

to the employee's normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included. Average salaries are for full-time employees for whom salary data are available.

Data on year-to-year changes in average salaries are subject to limitations which reflect the nature of the data collected. Changes in average salaries reflect not only general salary increases and merit or other increases given to individuals while in the same work level category, but they also may reflect other factors such as employee turnover, expansions or reductions in the work force, and changes in staffing patterns within establishments with different salary levels. For example, an expansion in force may increase the proportion of employees at the minimum of the salary range established for a work level, which would tend to lower the average, whereas a reduction or a low turnover in the work force may have the opposite effect. Similarly, promotions of employees to higher work levels of professional and administrative occupations may affect the average of each level. The established salary ranges for such occupations are relatively wide, and promoted employees, who may have been paid the maximum of the salary scale for the lower level, are likely to be replaced by less experienced employees who may be paid the minimum. Occupations most likely to reflect such changes in the salary averages are the higher levels of professional and administrative occupations and single-incumbent positions such as chief accountant and director of personnel.[4]

Some companies had an established policy of not disclosing salary data for some of their employees. Often this policy related to higher level positions because these employees were considered part of the management group or were classified in categories which included only one employee. In nearly all instances, however, information was provided on the number of such employees and the appropriate occupational classification. It was thus possible to estimate the proportion of employees in each category for whom salary data were not available. In all but 6 of the 78 occupational levels surveyed, the proportion of employees for whom salary data were not available was less than 5 percent.[5]

Comparisons between establishments that provided salary data for each specific occupational level and those that did not, indicate that the two classes of establishments did not differ materially in industries represented, employment, or salary levels for other jobs in this series for which data were available.

Occupational employment counts generated by the survey are estimates of the total for all establishments within the scope of the survey and not just for the establishments actually studied. An occupational employment estimate was derived by multiplying the full-time employment in the occupation in each sample establishment by the establishment weight and then summing these results.

Employees whose salary data were not available were not taken into account in the estimates. Also not taken into account were the few instances in which salary data were available but there was no satisfactory basis for classifying the employees by work level. In addition, survey occupations were limited to employees meeting the specific criteria in each survey definition and were not intended to include all employees in each field of work.[6] For these reasons, and because of differences in occupational structure among establishments, estimates of occupational employment obtained from the sample of establishments studied indicate only the relative importance of the occupations and levels as defined for the survey. These qualifications of the employment estimates do not materially affect the accuracy of the earnings data.

Wherever possible, data were collected for men and women separately. For clerical occupations in which both men and women are commonly employed, separate data by sex are available from the Bureau's area wage survey reports compiled by metropolitan area. Occupations and work levels in which women accounted for 5 percent or more of the employment were distributed according to the proportion of women employees as follows:

Women (percent)	*Occupation and level*
95 or more	File clerks I, senior stenographers, all levels of keypunch operators, secretaries, and typists
90-94	Accounting clerks I, file clerks II, and general stenographers
85-89	File clerks III
80-84	Accounting clerks II
55-59	Job analysts II
45-49	Messengers
40-44	Drafter-tracers
35-39	Buyers I, chemists I, and computer operators II
30-34	Auditors I and job analysts III
25-29	Accountants I, engineering technicians I, and computer operators I
20-24	Accountants II, chemists II, and computer operators III
15-19	Auditors II, attorneys I, job analysts IV, and engineering technicians II
10-14	Accountants III, attorneys II, buyers II, chemists III, computer operators IV, and drafters I

[4] These types of occupations also may be subject to greater sampling error, as explained in the paragraph headed "Estimates of sampling error."

[5] Those with 5 percent and over were: Chief accountants I, II, and III–7, 8, and 6 percent, respectively; and directors of personnel II, III, and IV–9, 7, and 12 percent, respectively.

[6] Engineers, for example, are defined to classify employees engaged in engineering work within a band of eight levels, starting with inexperienced engineering graduates and excluding only those within certain fields of specialization or in positions above those covered by level VIII. In contrast, occupations such as chief accountants and directors of personnel are defined to include only those with responsibility for a specified program and with duties and responsibilities as indicated for each of the more limited number of work levels selected for study.

Women (percent) – Continued	Occupation and level – Continued
5-9	Accountants IV, auditors III, attorneys III and IV, buyers III, chemists IV, directors of personnel I and II, engineers I, engineering technicians III, drafters II, and computer operators V and VI.

Conversion of salary rates

Salary data were collected from company records in their most readily available form, i.e., weekly, biweekly, semimonthly, monthly, or annually. For the initial tabulations, the salary data were first converted to a weekly basis for clerical and drafting occupations and to a monthly basis for all others. The factors used to convert these data are as follows:

Payroll basis	Conversion factors	
	To weekly basis	To monthly basis
Weekly	1.0000	4.3450
Biweekly	.5000	2.1725
Semimonthly	.4602	2.0000
Monthly	.2301	1.0000
Annual	.0192	.0833

All salaries were rounded to the nearest dollar. Average monthly salaries in tables 1, 2, and 3 and annual salaries in tables 1 and 2 for clerical and drafting occupations were derived from average weekly salaries (to the nearest penny) by multiplying the salaries by 4.345 and 52.14, respectively, and rounding the results. To obtain annual salaries for all other occupations in tables 1 and 2, average monthly salaries (to the nearest penny) were multiplied by 12 and rounded to the nearest dollar.

Method of determining median and quartile values

Median and quartile values were derived from distributions of employees by salary using $1 class intervals. Weekly salary class intervals were used for drafting and clerical occupations and monthly salary class intervals were used for all other occupations. Weekly values were multiplied by 4.345 to obtain monthly values and by 52.14 to obtain annual values. Annual values for other than drafting and clerical occupations were obtained by multiplying monthly values by 12.

Estimates of sampling error

The survey procedure yields estimates with widely varying sampling errors, depending on the frequency with which the job occurs and the dispersion of salaries. For the 78 surveyed occupational work levels, relative sampling errors of the average salaries were distributed as follows: 49 were under 2 percent; 19 were 2 and under 4 percent; 7 were 4 and under 6 percent; and 3 were 6 percent and over.[7] Sampling errors measure the validity of the band within which the true average is likely to fall. Thus, for an occupation with a sample average monthly salary of $1,000 and sampling error of 4 percent, the chances are 19 out of 20 that the interval of $960 to $1040 covers the true average.

Methods of computation of annual percent increases

The percent increases for each occupation in text table 1 were obtained by adding the aggregate salaries for each level in each of 2 successive years and dividing the later sum by the earlier sum. The resultant relative, less 100, is the percent increase. To eliminate the effects of year-to-year employment shifts, employment in the most recent year was multiplied by the average salaries in both years. Changes in the scope of the survey and in occupational definitions were incorporated into the series as soon as two comparable periods were available. Increases for each of the two broad occupational groups (the professional, administrative, and technical support group; and the clerical group) were obtained by averaging the increases of the occupations within the group. Increases for all survey occupations combined were determined by averaging the increases for the two broad occupational groups. Annual increases were then linked to obtain changes that have occurred since this series was begun and to compute average annual rates of increase for each occupation and group and for all occupations combined.

Year-to-year percent increases for each group specified in text table 2 and chart 1 were determined by adding average salaries for all occupations in the group for 2 consecutive years, dividing the later sum by the earlier sum, shifting the decimal two places to the right, and subtracting 100. Changes in the scope of the survey or in occupational definitions were incorporated into the series as soon as comparable data for 2 consecutive periods were available. The 16-year trends in text table 2 were obtained by linking changes for the individual periods.

[7] The 6-percent-and-over group included: Chief accountants I–10.6 percent; directors of personnel III–7.5 percent; and engineering technicians I–7.5 percent.

Appendix B. Survey Changes in 1977

Changes in survey scope

At the request of the President's agent, the survey was expanded (1) to include a number of industries not currently studied, and (2) to lower from 250 employees to 100 the survey's minimum establishment size requirement for six of the manufacturing industries currently studied. (See listing below.) This request was made as part of a continuing effort by the President's agent to improve the design of the survey and in response to recommendations from the General Accounting Office after its review of the survey process.[1]

Data from a full-survey test of this scope expansion in 1976 are published as appendix E to BLS Bulletin 1931, *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1976*. These test data provide a base for computing the 1976-77 changes in average salaries, thereby permitting the trend series for the survey to be continued.

[1] *Improvements Needed in the Survey of Non-Federal Salaries Used as a Basis for Adjusting Federal White-Collar Salaries*, Report B-167266 (General Accounting Office, 1973). Copies are available for $1 each from the U.S. General Accounting Office, Room 4518, 441 G Street, N.W. Washington, D.C. 20548.

Changes in occupational coverage

A five-level keypunch supervisor job was dropped from the survey.

Changes in occupational definitions

Exclusions of managerial positions from the job definitions of chemists and engineers have been clarified. Evaluation of survey data and collection experience reveals that the clarified definitions had little effect on matches made in the previous survey and did not adversely affect comparisons of data for trend purposes.

Table B-1. Survey scope expansions, March 1977

Industry division	Minimum employment	Industry division	Minimum employment
Added industries		Current industries with lowered size cutoff	
Mining	250	Chemicals and allied products	100
Construction	250	Petroleum refining and related industries	100
Transportation[1]	250	Machinery, except electrical	100
Pipe lines	100	Electrical and electronic machinery, equipment and supplies	100
Advertising	100	Transportation equipment	100
Consumer credit reporting agencies, mercantile reporting agencies, and adjustment and collection agencies	100	Measuring, analyzing and controlling instruments; photographic, medical and optical goods; watches and clocks	100
Computer and data processing services	100		
Management, consulting, and public relations services	100		
Noncommercial educational, scientific, and research organizations	100		

[1] Includes all but currently surveyed railroad, local and suburban passenger, deep sea water (foreign and domestic) and air transportation industries. U.S. Postal Service is excluded from the survey.

Appendix C. Occupational Definitions

The primary purpose of preparing job definitions for the Bureau's wage surveys is to assist its field staff in classifying into appropriate occupations, or levels within occupations, workers who are employed under a variety of payroll titles and different work arrangements from establishment to establishment and from area to area. This permits the grouping of occupational wage rates representing comparable job content. To secure comparability of job content, some occupations and work levels are defined to include only those workers meeting specific criteria as to training, job functions, and responsibilities. Because of this emphasis on interestablishment and interarea comparability of occupational content, the Bureau's occupational definitions may differ significantly from those in use in individual establishments or those prepared for other purposes. Also see note referring to the definitions for the drafting and clerical occupations at the end of this appendix.

Accountants and Auditors

ACCOUNTANT

Performs professional accounting work requiring knowledge of the theory and practice of recording, classifying, examining, *and* analyzing the data and records of financial transactions. The work generally requires a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Positions covered by this definition are characterized by the inclusion of work that is analytical, creative, evaluative, and advisory in nature. The work *draws upon* and *requires* a thorough knowledge of the fundamental doctrines, theories, principles, and terminology of accountancy, and often entails some understanding of such related fields as business law, statistics, and general management. (See also chief accountant.)

Professional responsibilities in accountant positions above the entry and developmental levels include several such duties as:

Analyzing the effects of transactions upon account relationships;

Evaluating alternative means of treating transactions;

Planning the manner in which account structures should be developed or modified;

Assuring the adequacy of the accounting system as the basis for reporting to management;

Considering the need for new or changed controls;

Projecting accounting data to show the effects of proposed plans on capital investments, income, cash position, and overall financial condition;

Interpreting the meaning of accounting records, reports, and statements;

Advising operating officials on accounting matters; and

Recommending improvements, adaptations, or revisions in the accounting system and procedures.

(Entry and developmental level positions provide opportunity to develop ability to perform professional duties such as those enumerated above.)

In addition to such professional work, most accountants are also responsible for assuring the proper recording and documentation of transactions in the accounts. They, therefore, frequently direct nonprofessional personnel in the actual day-to-day maintenance of books of accounts, the accumulation of cost or other comparable data, the preparation of standard reports and statements, and similar work. (Positions involving such supervisory work but not including professional duties as described above are not included in this description.)

Excluded are accountants whose *principal or sole* duties consist of designing or improving accounting systems or other nonoperating staff work, e.g., financial analysis, financial forecasting, tax advising, etc. (The criteria that follow for distinguishing among the several levels of work are inappropriate for such jobs.) Note, however, that professional accountant positions with responsibility for recording or reporting accounting data relative to taxes are included, as are operating or cost accountants whose work includes, but is not limited to, improvement of the accounting system.

Some accountants use electronic data processing equipment to process, record, and report accounting data. In

some such cases the machine unit is a subordinate segment of the accounting system; in others it is a separate entity or is attached to some other organization. In either instance, provided that the primary responsibility of the position is professional accounting work of the type otherwise included, the use of data processing equipment of any type does not of itself exclude a position from the accountant description nor does it change its level.

Accountant I

General characteristics. At this beginning professional level, the accountant learns to apply the principles, theories, and concepts of accounting to a specific system. The position is distinguishable from nonprofessional positions by the variety of assignments; rate and scope of development expected of the incumbent; and the existence, implicit or explicit, of a planned training program designed to give the entering accountant practical experience. (Terminal positions are excluded.)

Direction received. Works under close supervision of an experienced accountant whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of advancement potential. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

Typical duties and responsibilities. Performs a variety of accounting tasks such as: Examining a variety of financial statements for completeness, internal accuracy, and conformance with uniform accounting classifications or other specific accounting requirements; reconciling reports and financial data with financial statements already on file, and pointing out apparent inconsistencies or errors; carrying out assigned steps in an accounting analysis, such as computing standard ratios; assembling and summarizing accounting literature on a given subject; preparing relatively simple financial statements not involving problems of analysis or presentation; and preparing charts, tables, and other exhibits to be used in reports. In addition to such work, may also perform some nonprofessional tasks for training purposes.

Responsibility for direction of others. Usually none.

Accountant II

General characteristics. At this continuing developmental level the professional accountant makes practical applications of technical accounting practices and concepts beyond the mere application of detailed rules and instructions. Assignments are designed to expand practical experience and to develop professional judgment in the application of basic accounting techniques to simple professional problems. Is expected to be competent in the application of standard procedures and requirements to routine transactions, to raise questions about unusual or questionable items, and to suggest solutions. (Terminal positions are excluded.)

Direction received. Work is reviewed closely to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure professional growth. Progress is evaluated in terms of ability to apply professional knowledge to basic accounting problems in the day-to-day operations of an established accounting system.

Typical duties and responsibilities. Performs a variety of accounting tasks, e.g., prepares routine working papers, schedules, exhibits, and summaries indicating the extent of the examination and presenting and supporting findings and recommendations. Examines a variety of accounting documents to verify accuracy of computations and to ascertain that all transactions are properly supported, are in accordance with pertinent policies and procedures, and are classified and recorded according to acceptable accounting standards.

Responsibility for the direction of others. Usually none, although sometimes responsible for supervision of a few clerks.

Accountant III

General characteristics. Performs professional operating or cost accounting work requiring the standardized application of well-established accounting principles, theories, concepts, and practices. Receives detailed instructions concerning the overall accounting system and its objectives, the policies and procedures under which it is operated, and the nature of changes in the system or its operation. Characteristically, the accounting system or assigned segment is stable and well established (i.e., the basic chart of accounts, classifications, the nature of the cost accounting system, the report requirements, and the procedures are changed infrequently).

Depending upon the workload involved, the accountant may have such assignments as supervision of the *day-to-day operation* of: (a) The entire system of a subordinate establishment, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of a somewhat larger system, or (c) in a very large and complex system, may be assigned to a relatively narrow and specialized segment dealing with some problem, function, or portion of work which is itself of the level of difficulty characteristic of this level.

Direction received. A higher level professional accountant normally is available to furnish advice and assistance as

needed. Work is reviewed for technical accuracy, adequacy of professional judgment, and compliance with instructions through spot checks, appraisal of results, subsequent processing, analysis of reports and statements, and other appropriate means.

Typical duties and responsibilities. The primary responsibility of most positions at this level is to assure that the assigned day-to-day operations are carried out in accordance with established accounting principles, policies, and objectives. The accountant performs such professional work as: Developing nonstandard reports and statements (e.g., those containing cash forecasts reflecting the interrelations of accounting, cost budgeting, or comparable information); interpreting and pointing out trends or deviations from standards; projecting data into the future; predicting the effects of changes in operating programs; or identifying management informational needs, and refining account structures or reports accordingly.

Within the limits of delegated responsibility, makes day-to-day decisions concerning the accounting treatment of financial transactions. Is expected to recommend solutions to complex problems and propose changes in the accounting system for approval at higher levels. Such recommendations are derived from personal knowledge of the application of well-established principles and practices.

Responsibility for the direction of others. In most instances is responsible for supervision of a subordinate nonprofessional staff.

Accountant IV

General characteristics. Performs professional operating or cost accounting work which requires the application of well-established accounting principles, theories, concepts, and practices to a wide variety of difficult problems. Receives instructions concerning the objectives and operation of the overall accounting system. At this level, compared with level III, the accounting system or assigned segment is more complex, i.e., (a) is relatively unstable, (b) must adjust to new or changing company operations, (c) serves organizations of unusually large size, *or* (d) is complicated by the need to provide and coordinate separate or specialized accounting treatment and reporting (e.g., cost accounting using standard cost, process cost, and job order techniques) for different operations or divisions of the company.

Depending upon the workload and degree of coordination involved, the accountant IV may have such assignments as the supervision of the *day-to-day operation* of: (a) The entire accounting system of a subordinate establishment, or (b) a major segment (e.g., general accounting; cost accounting; or financial statements and reports) of an accounting system serving a larger and more complex establishment, or (c) the entire accounting system of a large (e.g., employing several thousand persons) subordiante establishment which in other respects has an accounting system of the complexity that characterizes level III.

Direction received. A higher level accountant normally is available to furnish advice and assistance as needed. Work is reviewed by spot checks and appraisal of results for adequacy of professional judgment, compliance with instructions, and overall accuracy and quality.

Typical duties and responsibilities. As at level III, a primary characteristic of most positions at this level is the responsibility of operating an accounting system or major segment of a system in the intended manner.

The accountant IV exercises professional judgment in making frequent appropriate recommendations for: New accounts; revisions in the account structure; new types of ledgers; revisions in reporting system or subsidiary records; changes in instructions regarding the use of accounts; new or refined account classifications or definitions; etc. Also makes day-to-day decisions concerning the accounting treatment of financial transactions and is expected to recommend solutions to complex problems beyond incumbent's scope of responsibility.

Responsibility for direction of others. Accounting staff supervised, if any, may include professional accountants.

Accountant V

General characteristics. Performs professional operating or cost accounting work which is of greater than average professional difficulty and responsibility because of the presence of unusual and novel problems or the unusual magnitude or impact of the accounting program. Typically this level of difficulty arises from (a) the large size of the accounting and operating organization, (b) the atypical nature of the accounting problems encountered, or (c) the unusually great involvement in accounting systems design and development.

Examples of assignments characteristic of this level are the supervision of the *day-to-day operation* of: (a) The entire accounting system of a subordinate establishment having an unusually novel and complex accounting system, or (b) the entire accounting system of a large (e.g., employing several thousand persons) subordinate establishment which in other respects has an accounting system of the complexity that characterizes level IV, or (c) the entire accounting system of a company or corporation that has a relatively stable and conventional accounting system and employs several thousand persons and has a few subordinate establishments which include accounting units, or (d) a major segment of an accounting system that substantially exceeds the characteristics described in any one of the preceding examples.

Direction received. An accountant of higher level normally is available to furnish advice and assistance as needed. Work is reviewed for adequacy of professional judgment, compliance with instructions, and overall quality.

Typical duties and responsibilities. The work is characterized by its unusual difficulty or responsibility. Accountants V typically are directly concerned on a relatively continuous basis with what the nature of the accounting system should be, with the devising or revising of the operating accounting policies and procedures that are necessary, and with the managerial as well as the accounting meaning of the reports and statements for which they are responsible. Accountants V are necessarily deeply involved in fundamental and complex accounting matters and in the managerial problems that are affected.

Responsibility for the direction of others. Accounting staff supervised generally includes professional accountants.

AUDITOR

Performs professional auditing work requiring a bachelor's degree in accounting or, in rare instances, equivalent experience and education combined. Audits the financial records and practices of a company, or of divisions or components of the company, to appraise systematically and verify the accounting accuracy of records and reports and to assure the consistent application of accepted accounting principles. Evaluates the adequacy of the accounting system and internal financial controls. Makes appropriate recommendations for improvement as necessary. To the extent determined necessary, examines the transactions entering into the balance sheet and the transactions entering into income, expense, and cost accounts. Determines:

The existence of recorded assets (including the observation of the taking of physical inventories) and the all-inclusiveness of recorded liabilities;

The accuracy of financial statements or reports and the fairness of presentation of facts therein;

The propriety or legality of transactions;

The degree of compliance with established policies and procedures concerning financial transactions.

Excluded are positions which do not require full professional accounting training because the work is confined on a relatively permanent basis to repetitive examinations of a limited area of company operations and accounting processes, e.g., only accounts payable and receivable; demurrage records and related functions, or station operations only of a railroad company; branch offices which do not engage in the full range of banking and accounting activities of the main bank; warehouse operations only of a mail order company; checking transactions to determine whether or not they conform to prescribed routines or procedures. (Examinations of such a repetitive or limited nature normally do not require or permit professional audit work to be performed.)

Auditor I

General characteristics. As a trainee auditor at the entering professional level, performs a variety of routine assignments. Typically, the trainee is rotated through a variety of tasks under a planned training program designed to provide practical experience in applying the principles, theories, and concepts of accounting and auditing to specific situations. (Terminal positions are excluded.)

Direction received. Works under close supervision of an experienced auditor whose guidance is directed primarily to the development of the trainee's professional ability and to the evaluation of advancement potential. Limits of assignments are clearly defined, methods of procedure are specified, and kinds of items to be noted and referred to supervisor are identified.

Typical duties and responsibilities. Assists in making audits by performing such tasks as: Verification of the accuracy of the balances in various records; examination of a variety of types of documents and vouchers for accuracy of computations; checking transactions to assure they are properly documented and have been recorded in accordance with correct accounting classifications; verifying the count of inventories; preparing detailed statements, schedules, and standard audit working papers; counting cash and other assets; preparing simple reconciliations; and similar functions.

Auditor II

General characteristics. At this continuing developmental level the professional auditor serves as a junior member of an audit team, independently performing selected portions of the audit which are limited in scope and complexity. Auditors at this level typically have acquired knowledge of company operations, policies, and procedures. (Terminal positions are excluded.)

Direction received. Detailed instructions are furnished and the work is reviewed to the extent necessary to verify its general accuracy and coverage of unusual problems, to insure conformance with required procedures and special instructions, and to assure the auditor's professional growth. Any technical problems not covered by instructions are brought to the attention of a superior. Progress is evaluated in terms of ability to apply professional knowledge to basic auditing situations.

Typical duties and responsibilities. Applies knowledge of *accounting theory* and audit practices to a variety of relatively simple professional problems in audit assignments,

including such tasks as: The verification of reports against source accounts and records to determine their reliability; reconciliation of bank and other accounts and verifying the detail of recorded transactions; detailed examinations of cash receipts and disbursement vouchers, payroll records, requisitions, work orders, receiving reports, and other accounting documents to ascertain that transactions are properly supported and are recorded correctly from an accounting or regulatory standpoint; or preparing working papers, schedules, and summaries.

Auditor III

General characteristics. Work at this level consists of the audit of operations and accounting processes that are relatively stable, well-established, and typical of the industry. The audits primarily involve the collection and analysis of readily available findings; there is previous audit experience that is directly applicable; the audit reports are normally prepared in a prescribed format using a standard method of presentation; and few if any major problems are anticipated. The work performed requires the *application* of substantial knowledge of accounting principles and practices, e.g., bases for distinguishing among capital maintenance and operating expenses; accruing reserves for taxes; and other accounting considerations of an equivalent nature.

Typical duties and responsibilities. The auditor examines transactions and verifies accounts; observes and evaluates accounting procedures and internal controls; prepares audit working papers and submits an audit report in the required pattern containing recommendations for needed changes or improvements. Usually is responsible for selecting the detailed audit methods to follow, choosing the audit sample and its size, determining the extent to which discrepancies need to be investigated, and deciding the depth of the analyses required to support reported findings and conclusions.

Examples of assignments involving work at this level:

As a team leader or working alone, independently conducts audits of the complete accounts and related operations of smaller or less complex companies (e.g., involving a centralized accounting system with few or no subordinate, subsidiary, or branch accounting records) or of comparable segments of larger companies.

As a member of an audit team, independently accomplishes varied audit assignments of the above described characteristics, typically major segments of complete audits, or assignments otherwise limited in scope of larger and more complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized *systems* integrated with the general accounting system).

Illustrative of such assignments are the audit and initial review of the accounting treatment and validity of reporting of overhead expenses in a large manufacturing or maintenance organization (e.g., major repair yard of a railroad); or, the checking, verification, and balancing of all accounts receivable and accounts payable; or, the analysis and verification of assets and reserves; or, the inspection and evaluation of accounting controls and procedures.

Auditor IV

General characterisitcs. Auditors at this level are experienced professionals who apply a thorough knowledge of accounting principles and theory in connection with a *variety* of audits. Work at this level is characterized by the audit of organizations and accounting processes which are complex and difficult because of such factors as: Presence of new or changed programs and accounting systems; existence of major specialized accounting functions (e.g., cost accounting, inventory accounting, sales accounting), in addition to general accounting; need to consider extensive and complicated regulatory requirements; lack of or difficulty in obtaining information; and other similar factors. Typically, a variety of different assignments are encountered over a period of time, e.g., 1 year. The audit reports prepared are comprehensive, explain irregularities, cite rules or regulations violated, recommend remedial actions, and contain analyses of items of special importance or interest to company management.

Direction received. Within an established audit program, has responsibility for independently planning and executing audits. Unusually difficult problems are discussed with the supervisor who also reviews completed assignments for adherence to principles and standards and the soundness of conclusions.

Typical duties and responsibilities. Auditors at this level have full responsibility for planning the audit, including determination of the aspects to emphasize, methods to be used, development of nonstandard or specialized audit aids such as questionnaires, etc., *where previous audit experience and plans are of limited applicability.*

Included in the scope of work that characterizes this level are such functions as: Evaluation of methods used for determining depreciation rates of equipment; evaluation of assets where original costs are unknown; evaluation of the reliability of accounting and reporting systems; analysis of cost accounting systems and cost reports to evaluate the basis for cost and price setting; evaluation of accounting procurement and supply management records, controls, and procedures; and many others.

Examples of assignments involving work at this level:

As a team leader or working alone, independently plans and conducts audits of the complete accounts and related operations of relatively large and complex companies (e.g., complex in that the accounting system entails cost, inventory, and comparable specialized accounting *systems* integrated with the general accounting system) or of company branch, subsidiary, or affiliated organizations which are individually of comparable size and complexity.

As a member of an audit team, independently plans and accomplishes audit assignments that constitute major segments of audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves.

NOTE: Excluded from level IV are auditors who, as team leaders or working alone, conduct *complete* audits of very large and complex organizations, for example, those with financial responsibilities so great as to involve specialized subordinate, subsidiary, or affiliate accounting systems that are complete in themselves; or are team members assigned to major segments of audits of even larger or more complex organizations.

CHIEF ACCOUNTANT

As the top technical expert in accounting, is responsible for directing the accounting program for a company or for an establishment of a company. The minimum accounting program includes: (1) General accounting (assets, liabilities, income, expense, and capital accounts, including responsibility for profit and loss and balance sheet statements); *and* (2) at least one other *major* accounting activity, typically tax accounting, cost accounting, property accounting, or sales accounting. It may also include such other activities as payroll and timekeeping, and mechanical or electronic data processing operations which are an adjunct of the accounting system. (Responsibility for an internal audit program is typically *not* included.)

The responsibilities of the chief accountant include *all* of the following:

1. On own responsibility, developing or adapting or revising an accounting system to meet the needs of the organization;
2. Supervising, either directly or through subordinate supervisors, the operation of the system with full management responsibility for the quality and quantity of work performed, training and development of subordinates, work scheduling and review, coordination with other parts of the organization served, etc.;
3. Providing, directly or through an official such as a comptroller, advisory services to the top management officials of the organization served as to:
   a. The status of financial resources and the financial trends or results of operations as revealed by accounting data, and selecting a manner of presentation that is meaningful to management;
   b. Methods for improving operations as suggested by an expert knowledge of accounting, e.g., proposals for improving cost control, property management, credit and collection, tax reduction, or similar programs.

Excluded are positions with responsibility for the accounting program *if* they also include (as a major part of the job) responsibility for budgeting; work measurement; organization, methods, and procedures studies; or similar nonaccounting functions. (Positions of such breadth are sometimes titled comptroller, budget and accounting manager, financial manager, etc.)

Some positions responsible for supervising general accounting and one or more other major accounting activities but which do *not* fully meet *all* of the responsibilities of a chief accountant specified above may be covered by the descriptions for accountant.

Chief accountant jobs which meet the characteristics described are classified by level of work[1] according to (a) authority and responsibility and (b) technical complexity, using the table accompanying the definitions which follow.

Authority and responsibility

AR-1. The accounting system (i.e., accounts, procedures, and reports to be used) has been prescribed in considerable detail by higher levels in the company or organization. The chief accountant has final, unreviewed authority within the prescribed system, to expand it to fit the particular needs of the organization served, e.g., in the following or comparable ways:

Provides greater detail in accounts and reports or financial statements;

Establishes additional accounting controls, accounts, subaccounts, and subsidiary records; and

Provides special or interim reports and statements needed by the manager responsible for the day-to-day operations of the organization served.

This degree of authority is typically found at a plant or similar subordinate establishment.

AR-2. The basic accounting system is prescribed in broad outline rather than in specific detail. While certain major financial reports, overall accounts, and general policies are required by the basic system, the chief accountant has broad latitude and *authority* to decide the specific methods, procedures, accounts, reports, etc., to be used within the organizational segment served. Approval must be secured from higher levels only for those changes which would basically affect the broad requirements prescribed by such higher levels. Typical responsibilities include:

Evaluating and taking final action on recommendations proposed by subordinate establishments for changes in aspects of the accounting system or activities not prescribed by higher authority;

Extending cost accounting operations to areas not previously covered;

Changing from one cost accounting method to another;

Expanding the utilization of computers within the accounting process; and

Preparing accounting reports and statements reflecting the events and progress of the entire organization for

[1] Insufficient data were obtained for level V to warrant presentation of average salaries.

Table C-1. Criteria for matching chief accountants by level

Level	Authority and responsibility[1]	Technical complexity[1]	Subordinate professional accounting staff
I	AR-1	TC-1	Only one or two professional accountants, who do not exceed the accountant III job definition.
II	AR-1	TC-2	About 5 to 10 professional accountants, with at least one or two matching the accountant IV job definition.
or			
	AR-2	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match the accountant IV job definition.
or			
	AR-3	TC-1	Only one or two professional accountants, who do not exceed the accountant IV job definition.
III	AR-1	TC-3	About 15 to 20 professional accountants. At least one or two match the accountant V job definition.
or			
	AR-2	TC-2	About 15 to 20 professional accountants. Many of these match the accountant IV job definition, but some may match the accountant V job definition.
or			
	AR-3	TC-1	About 5 to 10 professional accountants. Most of these match the accountant III job definition, but one or two may match as high as accountant V.
IV	AR-2	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.
or			
	AR-3	TC-2	About 15 to 20 professional accountants. Most of these match the accountant IV job definition, but several may match the accountant V and one or two may exceed that level.
V	AR-3	TC-3	About 25 to 40 professional accountants. Many of these match the accountant V job definition, but several may exceed that level.

[1] AR-1, -2, and -3 and TC-1, -2, and -3 are explained in the accompanying text.

which incumbent is responsible; often consolidating data submitted by subordinate segments.

This degree of authority is most typically found at intermediate organizational levels such as regional offices, or division or subsidiary headquarters. It is also found in some company level situations where the authority of the chief accountant is less extensive than is described in *AR-3*. More rarely it is found in plant level chief accountants who have been delegated more authority than usual for such positions as described in *AR-1*.

AR-3. Has complete responsibility for establishing and maintaining the framework for the basic accounting system used in the company, subject only to general policy guidance and control from a higher level company official responsible for general financial management. Typical responsibilities include:

Determining the basic characteristics of the company's accounting system and the specific accounts to be used;

Devising and preparing accounting reports and statements required to meet management's needs for data;

Establishing basic accounting policies, interpretations, and procedures;

Reviewing and taking action on proposed revisions to the company's accounting system suggested by subordinate units; and

Taking final action on all technical accounting matters.

Characteristically, participates extensively in broad company management processes by providing accounting advice, interpretations, or recommendations based on data accumulated in the accounting system and on professional judgment and experience.

Technical complexity

TC-1. The organization which the accounting program serves has relatively few functions, products, work processes, etc., and these tend to be stable and unchanging. The accounting system operates in accordance with well-established principles and practices or those of equivalent difficulty which are typical of that industry.

TC-2. The organization which the accounting program serves has a relatively large number of functions, products, work processes, etc., which require substantial and frequent adaptations of the basic system to meet management needs (e.g., adoption of new accounts, subaccounts, and subsidi-

ary records; revision of instructions for the use of accounts; improvement or expansion of methods for accumulating and reporting cost data in connection with new or changed work processes).

TC-3. The organization which the accounting program serves puts a *heavy demand on the accounting organization for specialized and extensive adaptations* of the basic system to meet management needs. Such demands arise because the functions, products, work processes, etc., of the organization are very numerous, diverse, unique, or specialized, or there are other comparable complexities. Consequently, the accounting system, to a considerable degree, is developed well beyond established principles and accounting practices in order to:

Provide for the solution of problems for which no clear precedents exist; or

Provide for the development or extension of accounting theories and practices to deal with problems to which these theories and practices have not previously been applied.

Subordinate staff

In table C-1 the number of professional accountants supervised is recognized to be a relatively crude criterion for distinguishing between various levels. It is to be considered less important in the matching process than the other criteria. In addition to the staff of professional accountants in the system for which the chief accountant is responsible, there are clerical, machine operation, bookkeeping, and related personnel.

Attorneys

ATTORNEY

Performs consultation and advisory work and carries out the legal processes necessary to effect the rights, privileges, and obligations of the company. The work performed requires completion of law school with an LL.B. degree (or the equivalent) and admission to the bar. *Responsibilities or functions include one or more of the following or comparable duties:*

Preparing and reviewing various legal instruments and documents, such as contracts, leases, licenses, purchases, sales, real estate, etc.;

Acting as agent of the company in its transactions;

Examining material (e.g., advertisements, publications, etc.) for legal implications; advising officials of proposed legislation which might affect the company;

Applying for patents, copyrights, or registration of company's products, processes, devices, and trademarks;

Advising whether to initiate or defend lawsuits;

Conducting pre-trial preparations; defending the company in lawsuits; and

Advising officials on tax matters, government regulations, and/or corporate rights.

Excluded from this definition are:

Patent work which requires professional training in addition to legal training (typically a degree in engineering or in a science);

Claims examining, claims investigating, or similar *work for which professional legal training and bar membership is not essential;*

Attorneys, frequently titled "general counsel" (and their immediate full associates or deputies), who serve as company officers or the equivalent and are responsible for participating in the overall management and formulation of policy for the company in addition to directing its legal work. (The duties and responsibilities of such positions exceed level VI as described below.)

Attorney jobs which meet the above definition are to be classified in accordance with table C-2 and the definitions which follow.

Difficulty

D-1. Legal questions are characterized by: Facts that are well established; clearly applicable legal precedents; *and* matters not of substantial importance to the organization. (Usually relatively limited sums of money, e.g., a few thousand dollars, are involved.)

Examples of D-1 work:

Legal investigation, negotiation, and research preparatory to defending the organization in potential or actual lawsuits involving alleged negligence where the facts can be firmly established and there are precedent cases directly applicable to the situation.

Searching case reports, legal documents, periodicals, textbooks, and other legal references, and preparing draft opinions on employee compensation or benefit questions when there is a substantial amount of clearly applicable statutory, regulatory, and case material.

Drawing up contracts and other legal documents in connection with real property transactions requiring the development of detailed information but *not* involving serious questions regarding titles to property or other major factual or legal issues.

D-2. Legal work is regularly difficult by reason of one or more of the following: The absence of clear and directly applicable legal precedents; the different possible interpretations that can be placed on the facts, the laws, or the precedents involved; the substantial importance of the legal matters to the organization (e.g., sums as large as $100,000 are generally directly or indirectly involved); the matter is being strongly pressed or contested in formal proceedings

Table C-2. Criteria for matching attorneys by level

Level	Difficulty of legal work[1]	Responsibility of job[1]	Experience required
I	This is the entry level. The duties and responsibilities after initial orientation and training are those described in D-1 and R-1.		Completion of law school with an LL.B. or J.D. degree plus admission to the bar.
II	D-1	R-2	Sufficient professional experience (at least 1 year, usually more) at the "D-1" level to assure competence as an attorney.
or	D-2	R-1	
III	D-2	R-2	At least 1 year, usually more, of professional experience at the "D-2" level.
or	D-3	R-1	
IV	D-2	R-3	Extensive professional experience at the "D-2" or a higher level.
or	D-3	R-2	
V	D-3	R-3	Extensive professional experience at the "D-3" level.
VI	D-3	R-4	Extensive professional experience at the "D-3" and "R-3" levels.

[1] D-1, -2, -3 and R-1, -2, -3, and -4 are explained in the accompanying text.

or in negotiations by the individuals, corporations, or government agencies involved.

Examples of D-2 work:

Advising on the legal implications of advertising representations when the facts supporting the representations and the applicable precedent cases are subject to different interpretations.

Reviewing and advising on the implications of new or revised laws affecting the organization.

Presenting the organization's defense in court in a negligence lawsuit which is strongly pressed by counsel for an organized group.

Providing legal counsel on tax questions complicated by the absence of precedent decisions that are directly applicable to the organization's situation.

D-3. Legal work is typically complex and difficult because of one or more of the following: The questions are unique and require a high order of original and creative legal endeavor for their solution; the questions require extensive research and analysis and the obtaining and evaluation of expert testimony regarding controversial issues in a scientific, financial, corporate organization, engineering, or other highly technical area; the legal matter is of critical importance to the organization and is being vigorously pressed or contested (e.g., sums such as $1 million or more are generally directly or indirectly involved).

Examples of D-3 work:

Advising on the legal aspects and implications of Federal antitrust laws to projected greatly expanded marketing operations involving joint ventures with several other organizations.

Planning legal strategy and representing a utility company in rate or government franchise cases involving a geographic area including parts or all of several States.

Preparing and presenting a case before an appellate court where the case is highly important to the future operation of the organization and is vigorously contested by very distinguished (e.g., having a broad regional or national reputation) legal talent.

Serving as the principal counsel to the officers and staff of an insurance company on the legal problems in the sale, underwriting, and administration of group contracts involving nationwide or multistate coverages and laws.

Performing the principal legal work in a nonroutine major revision of the company's charter or in effectuating new major financing steps.

Responsibility

R-1. Responsibility for final action is usually limited to matters covered by legal precedents and in which little deviation from standard practice is involved. Any decisions or actions having a significant bearing on the organization's business are reviewed. (Is given guidance in the initial stages of assignment, e.g., in planning and organizing legal research and studies. Assignments are then carried out with moderate independence although guidance is generally available and is sought from time to time on problem points.)

R-2. Usually works independently in investigating the facts, searching legal precedents, defining the legal and factual issues, drafting necessary legal documents, and developing conclusions and recommendations. Decisions having an important bearing on the organization's business are reviewed. (Receives information from supervisor regarding unusual circumstances or important policy considerations pertaining to a legal problem. If trials are involved, may receive guid-

ance from a supervisor regarding presentation, line of approach, possible line of opposition to be encountered, etc. In the case of nonroutine written presentations the final product is reviewed carefully, but primarily for overall soundness of legal reasoning and consistency with organization policy. Some (but not all) attorneys make assignments to one or more lower level attorneys, aids, or clerks.)

R-3. Carries out assignments independently and makes final legal determinations in matters of substantial importance to the organization. Such determinations are subject to review only for consistency with company policy, possible precedent effect, and overall effectiveness. To carry out assignments, deals regularly with company officers and top level management officials and confers or negotiates regularly with senior attorneys and officials in other companies or in government agencies on various aspects of assigned work. (Receives little or no preliminary instruction on legal problems and a minimum of technical legal supervision. May assign and review work of a few attorneys, but this is not a primary responsibility.)

R-4. Carries out assignments which entail independently planning investigations and negotiations on legal problems of the highest importance to the organization and developing completed briefs, opinions, contracts, or other legal products. To carry out assignments, represents the organization at conferences, hearings, or trials and personally confers and negotiates with top attorneys and top-ranking officials in private companies or in government agencies. On various aspects of assigned work may give advice directly and personally to corporation officers and top level managers, or may work through the general counsel of the company in advising officers. (Generally receives no preliminary instruction on legal problems. On matters requiring the concentrated efforts of several attorneys or other specialists, is responsible for directing, coordinating, and reviewing the work of the attorneys involved.)

OR

As a primary responsibility, directs the work of a staff of attorneys, one, but usually more, of whom regularly perform D-3 legal work. With respect to the work directed, gives advice directly to corporation officers and top managerial officers, or may give such advice through the general counsel. (Receives guidance as to organization policy but no technical supervision or assistance except when requesting advice from, or briefing by, the general counsel on the overall approach to the most difficult, novel, or important legal questions. Usually reports to the general counsel or deputy.)

Buyers

BUYER

Purchases materials, supplies, equipment, and services (e.g., utilities, maintenance, and repair). In some instances items are of types that must be specially designed, produced, or modified by the vendor in accordance with drawings or engineering specifications.

Solicits bids, analyzes quotations received, and selects or recommends supplier. May interview prospective vendors. Purchases items and services at the most favorable price consistent with quality, quantity, specification requirements, and other factors. Prepares or supervises preparation of purchase orders from requisitions. May expedite delivery and visit vendors' offices and plants.

Normally, purchases are unreviewed when they are consistent with past experience, and are in conformance with established rules and policies. Proposed purchase transactions that deviate from the usual or from past experience in terms of prices, quality of items, quantities, etc., or that may set precedents for future purchases, are reviewed by higher authority prior to final action.

In addition to the work described above, some (but not all) buyers direct the work of one or a few clerks who perform routine aspects of the work. As a secondary and subsidiary duty, some buyers may also sell or dispose of surplus, salvage, or used materials, equipment, or supplies.

NOTE: Some buyers are responsible for the purchasing of a variety of items and materials. When the variety includes items and work described at more than one of the following levels, the position should be considered to equal the highest level that characterizes at least a substantial portion of the buyer's time.

Excluded are:

a. Buyers of items for direct sale, either wholesale or retail;

b. Brokers and dealers buying for clients or for investment purposes;

c. Positions that specifically require professional education and qualifications in a physical science or in engineering (e.g., chemist, mechanical engineer);

d. Buyers who specialize in purchasing a single or a few related items of highly variable quality such as raw cotton or wool, tobacco, cattle, or leather for shoe uppers, etc. Expert personal knowledge of the item is required to judge the relative value of the goods offered and to decide the quantity, quality, and price of each purchase in terms of its probable effect on the organization's profit and competitive status;

e. Buyers whose principal responsibility is the supervision of other buyers or the management, direction, or supervision of a purchasing program;

f. Persons predominantly concerned with contract or subcontract adminsitration;

g. Persons whose major duties consist of ordering,

reordering, or requisitioning items under existing contracts; and

h. Positions restricted to clerical functions or to purchase expediting work.

Buyer I

Purchases "off-the-shelf" types of readily available, commonly used materials, supplies, tools, furniture, services, etc.

Transactions usually involve local retailers, wholesalers, jobbers, and manufacturers' sales representatives.

Quantities purchased are generally small amounts, e.g., those available from local sources.

Examples of items purchased include: Common stationery and office supplies; standard types of office furniture and fixtures; standard nuts, bolts, screws; janitorial and common building maintenance supplies; and common building maintenance or common utility services.

Buyer II

Purchases "off-the-shelf" types of standard, generally available technical items, materials, and services.

Transactions usually involve dealing directly with manufacturers, distributors, jobbers, etc.

Quantities of items and materials purchased may be relatively large, particularly in the case of contracts for continuing supply over a period of time.

May be responsible for locating or promoting possible new sources of supply. Usually is expected to keep abreast of market trends, changes in business practices in the assigned markets, new or altered types of materials entering the market, etc.

Examples of items purchased include: Industrial types of handtools; electronic tube and component test instruments; standard electronic parts and components; electric motors; gasoline service station equipment; PBX or other specialized telephone services; and routine purchases of common raw materials such as standard grades and sizes of steel bars, rods, and angles.

Also included at this level are buyers of materials of the types described for buyer I when the quantities purchased are large so that local sources of supply are generally inadequate and the buyer must deal directly with manufacturers on a broader than local scale.

Buyer III

Purchases items, materials, or services of a technical and specialized nature. The items, while of a common general type, are usually made, altered, or customized to meet the user's specific needs and specifications.

Transactions usually require dealing with manufacturers. The number of potential vendors is likely to be small and price differentials often reflect important factors (quality, delivery dates and places, etc.) that are difficult to evaluate.

The quantities purchased of any item or service may be large.

Many of the purchases involve one or more of such complications as: Specifications that detail, in technical terms, the required physical, chemical, electrical, or other comparable properties; special testing prior to acceptance; grouping of items for lot bidding and awards; specialized processing, packing, or packaging requirements; export packs; overseas port differentials; etc.

Is expected to keep abreast of market and product developments. May be required to locate new sources of supply.

Some positions may involve *assisting* in the training or supervising of lower level buyers or clerks.

Examples of items purchased include: Castings; special extruded shapes of normal size and material; special formula paints; electric motors of special shape or speeds; special packaging of items; and raw materials in substantial quantities.

Buyer IV

Purchases highly complex and technical items, materials, or services, usually those specially designed and manufactured exclusively for the purchaser.

Transactions require dealing with manufacturers and often involve persuading potential vendors to undertake the manufacturing of custom-designed items according to complex and rigid specifications.

Quantities of items and materials purchased are often large in order to satisfy the requirements for an entire large organization for an extended period of time. Complex schedules of delivery are often involved. Buyer determines appropriate quantities to be contracted for at any given period of time.

Transactions are often complicated by the presence of one or more such matters as inclusion of: Requirements for spare parts, preproduction samples and testing, or technical literature; or patent and royalty provisions.

Keeps abreast of market and product developments. Develops new sources of supply.

In addition to the work described above, a few positions may also require supervision over a few lower level buyers or clerks. (No position is included in this level *solely* because supervisory duties are performed.)

Examples of items purchased include: Special purpose high cost machine tools and production facilities; raw materials of critically important characteristics or quality; parts, subassemblies, components, etc., specially designed and made to order (e.g., communications equipment for installation in aircraft being manufactured; component assemblies for missiles and rockets; and motor vehicle frames).

NOTE: Excluded are buying positions above level IV. Some buyers above level IV make purchases in such unusually large quantities that they can affect the market price of a commodity or produce other significant effects on the industry or trade concerned. Others may purchase items of either (1) extraordinary technical complexity, e.g., involving the outermost limits of science or engineering, or (2) unusually high individual or unit value. Such buyers often persuade suppliers to expand their plants or convert facilities to the production of new items or services. These types of buying functions are often performed by program managers or company officials who have primary responsibilities other than buying.

Personnel Management

JOB ANALYST

Performs work involved in collecting, analyzing, and developing occupational data relative to jobs, job qualifications, and worker characteristics as a basis for compensating employees in a fair, equitable, and uniform manner. Performs such duties as studying and analyzing jobs and preparing descriptions of duties and responsibilities and of the physical and mental requirements needed by workers; evaluating jobs and determining appropriate wage or salary levels in accordance with their difficulty and responsibility; independently conducting or participating with representatives of other companies in conducting compensation surveys within a locality or labor market area; assisting in administering merit rating programs; reviewing changes in wages and salaries indicated by surveys and recommending changes in pay scales; and auditing individual jobs to check the propriety of evaluations and to apply current job classifications. (Positions also responsible for supplying management with a high technical level of advice regarding the solution of broad personnel management problems should be excluded.)

Job Analyst I

As a trainee, performs work in designated areas and of limited occupational scope. Receives immediate supervision in assignments designed to provide training in the application of established methods and techniques of job analysis. Studies the least difficult jobs and prepares reports for review by a job analyst of higher level.[3]

Job Analyst II

Studies, describes, and evaluates jobs in accordance with established procedures. Is usually assigned to the simpler kinds of both wage and salaried jobs in the establishment. Works independently on such assignments but is limited by defined area of assignment and instructions of superior.

Job Analyst III

Analyzes and evaluates a variety of wage and salaried jobs in accordance with established evaluation systems and procedures. May conduct wage surveys within the locality or participate in conducting surveys of broad compensation areas. May assist in developing survey methods and plans. Receives general supervision but responsibility for final action is limited.

Job Analyst IV

Analyzes and evaluates a variety of jobs in accordance with established evaluation systems and procedures, and is given assignments which regularly include responsibility for the more difficult kinds of jobs. ("More difficult" means jobs which consist of hard-to-understand work processes; e.g., professional, scientific, administrative, or technical; *or* jobs in new or emerging occupational fields; *or* jobs which are being established as part of the creation of new organizations; *or* where other special considerations of these types apply.) Receives general supervision, but responsibility for final action is limited. May participate in the development and installation of evaluation or compensation systems, which may include those for merit rating programs. May plan survey methods and conduct or direct wage surveys within a broad compensation area.

[3] Insufficient data were obtained for level I to warrant presentation of average salaries.

DIRECTOR OF PERSONNEL

Directs a personnel management program for a company or a segment of a company. Serves top management officials of the organization as the source of advice and assistance on personnel management matters and problems generally; is typically consulted on the personnel implications of planned changes in management policy or program, the effects on the organization of economic or market trends, product or production method changes, etc.; represents management in contacts with other companies, trade associations, government agencies, etc., dealing primarily with personnel management matters.

Typically the director of personnel for a company reports to a company officer in charge of industrial relations and personnel management activities or an officer of similar level. Below the company level the director of personnel typically reports to a company officer or a high management official who has responsibility for the operation of a plant, establishment, or other segment of the company.

For a job to be covered by this definition, the personnel management program *must include* responsibility for *all three* of the following functions:

1. *Administering a job evaluation system:* i.e., a system in which there are established procedures by which jobs are analyzed and evaluated on the basis of their duties, responsibilities, and qualification requirements in order to provide a foundation for equitable compensation. Typically, such a system includes the use of one or more sets of job evaluation factors and the preparation of formal job descriptions. It *may* also include such related functions as wage and salary surveys or merit rating system administration. The job evaluation system(s) does not necessarily cover all jobs in the organization, but does cover a substantial portion of the organization.

2. *Employment and placement function:* i.e., recruiting actively for at least some kinds of workers through a variety of sources (e.g., schools or colleges, employment agencies, professional societies, etc.); evaluating applicants against demands of particular jobs by use of such techniques as job analysis to determine requirements, interviews, written tests of aptitude, knowledge, or skill, reference checks, experience evaluations, etc.; recommending selections and job placements to management, etc.

3. *Employee relations and services function:* i.e., functions designed to maintain employees' morale and productivity at a high level (for example, administering a formal or informal grievance procedure; identifying and recommending solutions for personnel problems such as absenteeism, high turnover, low productivity, etc.; administration of beneficial suggestions system, retirement, pension, or insurance plans, merit rating system, etc.; overseeing cafeteria operations, recreational programs, industrial health and safety programs, etc.).

In addition, positions covered by this definition may, but do not necessarily, include responsibilities in the following areas:

Employee training and development;

Labor relations activities which are confined mainly to the administration, interpretation, and application of those aspects of labor union contracts that are essentially of the type described under (3) above. May also participate in bargaining of a subordinate nature, e.g., to negotiate detailed settlement of such matters as specific rates, job classifications, work rules, hiring or layoff procedures, etc., within the broad terms of a general agreement reached at higher levels, or to supply advice and information on technical points to the company's principal representative.

Equal employment opportunity (EEO);

Reporting under the Occupational Safety and Health Act (OSHA).

Excluded are positions in which responsibility for actual contract negotiation with labor unions as the principal company representative is a significant aspect of the job, i.e., a responsibility which serves as a primary basis for qualification requirements and compensation.

Director of personnel jobs which meet the above definition are classified by level of work[3] in accordance with the criteria shown in table C-3.

[3] Insufficient data were obtained for level V to warrant presentation of average salaries.

Table C-3. Criteria for matching directors of personnel by level

Number of employees in work force serviced	"Operations level" personnel program[1]		Number of employees in work force serviced	"Development level" personnel program[2]	
	"Type A" organization serviced[3]	"Type B" organization serviced[4]		"Type A" organization serviced[3]	"Type B" organization serviced[4]
250-750	I	II	250-750	II	III
1,000-5,000	II	III	1,000-5,000	III	IV
6,000-12,000	III	IV	6,000-12,000	IV	V
15,000-25,000	IV	V	15,000-25,000	V	–

[1] *"Operations level" personnel program*—director of personnel servicing an organizational segment (e.g., a plant) of a company, where the basic personnel program policies, plans, objectives, etc., are established at company headquarters or at some other higher level between the plant and the company headquarters level. The personnel director's responsibility is to put these into operation at the local level, in such a manner as to most effectively serve the local management needs.

[2] *"Development level" personnel program*—either:

(a) Director of personnel servicing an entire company (with or without subordinate establishments) where the personnel director plays an important role in establishment of basic personnel policies, plans, objectives, etc., for the company subject to policy direction and control from company officers, or (b) director of personnel servicing an intermediate organization below the company level, e.g., a division or a subsidiary, to which a relatively complete delegation of personnel program planning and development responsibility is made. In this situation only basic policy direction is given by the parent company and local officers. The director of personnel has essentially the same degree of latitude and responsibility for establishment of basic personnel policies, plans, objectives, etc., as described above in (a).

[3] *"Type A" organization serviced*—most jobs serviced do not present particularly difficult or unusual recruitment, job evaluation, or training problems because the jobs consist of relatively easy-to-understand work processes, and an adequate labor supply is available. These conditions are most likely to be found in organizations in which the work force and organizational structure are relatively stable.

[4] *"Type B" organization serviced*—a substantial proportion of the jobs present difficult recruitment, job evaluation, or training problems because the jobs: Consist of hard-to-understand work processes (e.g., professional, scientific, administrative, or technical); have hard-to-match skill requirements; are in new or emerging occupations; or are extremely hard to fill. These conditions are most likely to be found in organizations in which the work force, organizational structure, work processes or functions, etc., are complicated or unstable.

NOTE: There are gaps between different degrees of all three elements used to determine job level matches. These gaps have been provided purposely to allow room for judgment in getting the best overall job level match for each job. Thus, a job which services a work force of 850 employees should be matched with level II if it is a personnel program operations level job where the nature of the organization serviced seems to fall slightly below the definition for type B. However, the same job should be matched with level I if the nature of the organization serviced clearly falls well within the definition for type A.

Chemists and Engineers

CHEMIST

Performs professional work in research, development, interpretation, and analysis to determine the composition, molecular structure, and properties of substances; to develop or investigate new materials and processes; and to investigate the transformations which substances undergo. Work typically requires a B.S. degree in chemistry or the equivalent in appropriate and substantial college level study of chemistry plus experience.

Chemist I

General characteristics. This is the entry level of professional work requiring a bachelor's degree in chemistry and no experience, or the equivalent of a degree in appropriate education and experience. Performs assignments designed to develop professional capabilities and to provide experience in the application of training in chemistry as it relates to the company's programs. May also receive formal classroom or seminar type training. (Terminal positions are excluded.)

Direction received. Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress, and is reviewed for accuracy upon completion.

Typical duties and responsibilities. Performs a variety of routine tasks that are planned to provide experience and familiarization with the chemistry staff, methods, practices, and programs of the company. The work includes a variety of routine qualitative and quantitative analyses; physical tests to determine properties such as viscosity, tensile strength, and melting point; and assisting more experienced chemists to gain additional knowledge through personal observation and discussion.

Responsibility for the direction of others. Usually none.

Chemist II

General characteristics. At this continuing developmental level, performs routine chemical work requiring selection and application of general and specialized methods, techniques, and instruments commonly used in the laboratory, and the ability to carry out instructions when less common or proposed methods or procedures are necessary. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

Direction received. Supervisor establishes the nature and extent of analysis required, specifies methods and criteria on new types of assignments, and reviews work for thoroughness of application of methods and accuracy of results.

Typical duties and responsibilities. Carries out a wide variety of standardized methods, tests, and procedures. In accordance with specific instructions may carry out proposed and less common ones. Is expected to detect problems in using standardized procedures because of the condition of the sample, difficulties with the equipment, etc. Recommends modifications of procedures, e.g., extending or curtailing the analysis or using alternate procedures, based on knowledge of the problem and pertinent available literature. Conducts specified phases of research projects as an assistant to an experienced chemist.

Responsibility for the direction of others. May be assisted by a few aids or technicians.

Chemist III

General characteristics. Performs a broad range of chemical tests and procedures utilized in the laboratory, using judgment in the independent evaluation, selection, and adaptation of standard methods and techniques. May carry through a complete series of tests on a product in its different process stages. Some assignments require a specialized knowledge of one or two common categories of related substances. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

Direction received. On routine work, supervision is very general. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

Typical duties and responsibilities. In accordance with instructions as to the nature of the problem, selects standard methods, tests or procedures; when necessary, develops or works out alternate or modified methods with supervisor's concurrence. Assists in research by analyzing samples or testing new procedures that require specialized training because (a) standard methods are inapplicable, (b) analytical findings must be interpreted in terms of compliance or noncompliance with standards, or (c) specialized and advanced equipment and techniques must be adapted.

Responsibility for the direction of others. May supervise or coordinate the work of a few technicians or aids, and be assisted by lower level chemists.

Chemist IV

General characteristics. As a fully competent chemist in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring (a) mastery of specialized techniques or ingenuity in selecting and evaluating approaches to unforeseen or novel problems, and (b) ability to apply a research approach to the solution of a wide variety of problems and to assimilate the details and significance of chemical and physical analyses, procedures, and tests. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

Direction received. Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

Typical duties and responsibilities. Conducts laboratory assignments requiring the determination and evaluation of alternative procedures and the sequence of performing them. Performs complex, exacting, unusual analytical assignments requiring specialized knowledge of techniques or products. Interprets results, prepares reports, and may provide technical advice in specialized area.

Responsibility for the direction of others. May supervise a small staff of chemists and technicians.

Chemist V

General characteristics. Participates in planning laboratory programs on the basis of specialized knowledge of problems and methods and probable value of results. May serve as an expert in a narrow specialty (e.g., class of chemical compounds, or a class of products), making recommendations and conclusions which serve as the basis for undertaking or rejecting important projects. Development of the knowledge and expertise required for this level of work usually reflects progressive experience through chemist IV.

Direction received. Supervision and guidance relate largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity, plans, organizes, and directs assigned laboratory programs. Independently defines scope and critical elements of the projects and selects approaches to be taken. A substantial portion of the work supervised is comparable to that described for chemist IV. (2) As individual researcher or worker, carries out projects requiring development of new or highly modified scientific techniques and procedures, extensive knowledge of specialty, and knowledge of related scientific fields.

Responsibility for the direction of others. Supervises, coordinates, and reviews the work of a small staff of chemists and technicians engaged in varied research and development projects, or a larger group performing routine analytical work. Estimates personnel needs and schedules and assigns work to meet completion date. Or, as individual researcher or worker, may be assisted on projects by other chemists or technicians.

Chemist VI

General characteristics. Performs work requiring leadership and expert knowledge in a specialized field, product, or process. Formulates and conducts a systematic attack on a problem area of considerable scope and complexity which must be approached through a series of complete and conceptually related studies, or a number of projects of lesser scope. The problems are complex because they are difficult to define and require unconventional or novel approaches or have other difficult features. Maintains liaison with individuals and units within and outside the organization, with responsibility for acting independently on technical matters pertaining to the field. Work at this level usually requires extensive progressive experience including work comparable to chemist V.

Direction received. Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire chemical program of a company, when the program is of limited complexity and scope. Activities supervised are of such a scope that they require a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker determines, conceives, plans, and conducts projects of major importance to the company. Applies a high degree of originality and ingenuity in adapting, extending, and synthesizing existing theory, principles, and techniques into original combinations and configurations. May serve as a consultant to other chemists in specialty.

Responsibility for the direction of others. Plans, organizes, and supervises the work of a staff of chemists and technicians. Evaluates progress of the staff and results obtained,

and recommends major changes to achieve overall objectives. Or, as individual worker or researcher, may be assisted on individual projects by other chemists or technicians.

Chemist VII

General characteristics. Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive chemical activities. Initiates and maintains extensive contacts with key chemists and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level individuals will have demonstrated creativity, foresight, and mature judgment in anticipating and solving unprecedented chemical problems, determining program objectives and requirements, organizing programs and projects, and developing standards and guides for diverse chemical activities.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a chemical program of a company with extensive and diversified scientific requirements, or (b) the entire chemical program of a company where the program is more limited in scope. The overall chemical program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Makes authoritative technical recommendations concerning the scientific objectives and levels of work which will be most profitable in light of company requirements and scientific and industrial trends and developments. Recommends facilities, personnel, and funds required. (2) As individual researcher and consultant, selects problems for research to further the company's objectives. Conceives and plans investigations in which the phenomena and principles are not adequately understood, and where few or contradictory scientific precedents or results are available for reference. Outstanding creativity and mature judgment are required to devise hypotheses and techniques of experimentation and to interpret results. As a leader and authority in the company, in a broad area of specialization, or in a narrow but intensely specialized one, advises the head of a large laboratory or company officials on complex aspects of extremely broad and important programs. Has responsibility for exploring, evaluating, and justifying proposed and current programs and projects and furnishing advice on unusually complex and novel problems in the specialty field. Typically will have contributed innovations (e.g., techniques, products, procedures) which are regarded as significant advances in the field.

Responsibility for the direction of others. Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to chemist VI; or, as individual researcher and consultant, may be assisted on individual projects by other chemists and technicians.

Chemist VIII

General characteristics. Makes decisions and recommendations that are authoritative and have a far-reaching impact on extensive chemical and related activities of the company. Negotiates critical and controversial issues with top level chemists and officers of other organizations and companies. Individuals at this level have demonstrated a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive chemical programs and activities of outstanding novelty and importance.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) the entire chemical program of a company which is of moderate scope, or (b) an important segment of a chemical program of a company with very extensive and highly diversified scientific requirements, where programs are of such complexity and scope that they are of critical importance to overall operations and include problems of extraordinary difficulty that have resisted solution. Decides the kind and extent of chemical programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant formulates and guides the attack on problems of exceptional difficulty and marked importance to the company and/or industry. Problems are characterized by the lack of scientific precedents and source materials, or the lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas of considerable novelty and importance. Has made contributions such as new products or techniques, development of processes, etc., which are regarded as major advances in the field.

Responsibility for the direction of others. Supervises several subordinate supervisors or team leaders some of whose positions are comparable to chemist VII, or individual researchers some of whose positions are comparable to chemist VII and sometimes chemist VIII. As an individual researcher and consultant may be assisted on individual projects by other chemists or technicians.

NOTE: Individuals in charge of a company's chemical program may match any of several of the survey job levels, depending on the size and complexity of chemical programs. Excluded from the definition are: (1) Chemists in

charge of programs so extensive and complex (e.g., consisting of highly diversified or unusually novel products and procedures) that one or more subordinate supervisory chemists are performing at level VIII; (2) individuals whose decisions have direct and substantial effect on setting policy for the organization (included, however, are supervisors deciding the "kind and extent of chemical programs" within broad guidelines set at higher levels); (3) individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

ENGINEER

Performs professional work in research, development, design, testing, analysis, production, construction, maintenance, operation, planning, survey, estimating, application, or standardization of engineering facilities, systems, structures, processes, equipment devices, or materials requiring knowledge of the science and art by which materials, natural resources, and power are made useful. Work typically requires a B.S. degree in engineering or the equivalent in combined education and experience. (*Excluded* are: Safety engineers, industrial engineers, quality control engineers, sales engineers, and engineers whose primary responsibility is to be in charge of nonprofessional maintenance work.)

Engineer I

General characteristics. This is the entry level of professional work requiring a bachelor's degree in engineering and no experience, or the equivalent of a degree in appropriate education and experience. Performs assignments designed to develop professional work knowledges and abilities. May also receive formal classroom or seminar-type training. (Terminal positions are excluded.)

Direction received. Works under close supervision. Receives specific and detailed instructions as to required tasks and results expected. Work is checked during progress and is reviewed for accuracy upon completion.

Typical duties and responsibilities. Performs a variety of routine tasks that are planned to provide experience and familiarization with the engineering staff, methods, practices, and programs of the company.

Responsibility for the direction of others. Usually none.

Engineer II

General characteristics. At this continuing developmental level, performs routine engineering work requiring application of standard techniques, procedures, and criteria in carrying out a sequence of related engineering tasks. Limited exercise of judgment is required on details of work and in making preliminary selections and adaptations of engineering alternatives. Requires work experience acquired in an entry level position, or appropriate graduate level study. For training and developmental purposes, assignments may include some work that is typical of a higher level. (Terminal positions are excluded.)

Direction received. Supervisor screens assignments for unusual or difficult problems and selects techniques and procedures to be applied on nonroutine work. Receives close supervision on new aspects of assignments.

Typical duties and responsibilities. Using prescribed methods, performs specific and limited portions of a broader assignment of an experienced engineer. Applies standard practices and techniques in specific situations, adjusts and correlates data, recognizes discrepancies in results, and follows operations through a series of related detailed steps or processes.

Responsibility for the direction of others. May be assisted by a few aids or technicians.

Engineer III

General characteristics. Independently evaluates, selects, and applies standard engineering techniques, procedures, and criteria, using judgment in making minor adaptations and modifications. Assignments have clear and specified objectives and require the investigation of a limited number of variables. Performance at this level requires developmental experience in a professional position, or equivalent graduate level education.

Direction received. Receives instructions on specific assignment objectives, complex features, and possible solutions. Assistance is furnished on unusual problems and work is reviewed for application of sound professional judgment.

Typical duties and responsibilities. Performs work which involves conventional types of plans, investigations, surveys, structures, or equipment with relatively few complex features for which there are precedents. Assignments usually include one or more of the following: Equipment design and development, test of materials, preparation of specifications, process study, research investigations, report preparation, and other activities of limited scope requiring knowledge of principles and techniques commonly employed in the specific narrow area of assignments.

Responsibility for the direction of others. May supervise or coordinate the work of drafters, technicians, and others who assist in specific assignments.

Engineer IV

General characteristics. As a fully competent engineer in all conventional aspects of the subject matter or the functional area of the assignments, plans and conducts work requiring judgment in the independent evaluation, selection, and substantial adaptation and modification of standard techniques, procedures, and criteria. Devises new approaches to problems encountered. Requires sufficient professional experience to assure competence as a fully trained worker; or, for positions primarily of a research nature, completion of all requirements for a doctoral degree may be substituted for experience.

Direction received. Independently performs most assignments with instructions as to the general results expected. Receives technical guidance on unusual or complex problems and supervisory approval on proposed plans for projects.

Typical duties and responsibilities. Plans, schedules, conducts, or coordinates detailed phases of the engineering work in a part of a major project or in a total project of moderate scope. Performs work which involves conventional engineering practice but may include a variety of complex features such as conflicting design requirements, unsuitability of standard materials, and difficult coordination requirements. Work requires a broad knowledge of precedents in the specialty area and a good knowledge of principles and practices of related specialties.

Responsibility for the direction of others. May supervise a few engineers or technicians on assigned work.

Engineer V

General characteristics. Applies intensive and diversified knowledge of engineering principles and practices in broad areas of assignments and related fields. Makes decisions independently on engineering problems and methods, and represents the organization in conferences to resolve important questions and to plan and coordinate work. Requires the use of advanced techniques and the modification and extension of theories, precepts, and practices of own field and related sciences and disciplines. The knowledge and expertise required for this level of work usually result from progressive experience, including work comparable to engineer IV.

Direction received. Supervision and guidance relate largely to overall objectives, critical issues, new concepts, and policy matters. Consults with supervisor concerning unusual problems and developments.

Typical duties and responsibilities. One or more of the following: (1) In a supervisory capacity plans, develops, coordinates, and directs a large and important engineering project or a number of small projects with many complex features. A substantial portion of the work supervised is comparable to that described for engineer IV. (2) As individual researcher or worker carries out complex or novel assignments requiring the development of new or improved techniques and procedures. Work is expected to result in the development of new or refined equipment, materials, processes, products, and/or scientific methods. (3) As staff specialist develops and evaluates plans and criteria for a variety of projects and activities to be carried out by others. Assesses the feasibility and soundness of proposed engineering evaluation tests, products, or equipment when necessary data are insufficient or confirmation by testing is advisable. Usually performs as a staff advisor and consultant as to a technical specialty, a type of facility or equipment, or a program function.

Responsibility for the direction of others. Supervises, coordinates, and reviews the work of a small staff of engineers and technicians; estimates personnel needs and schedules and assigns work to meet completion date. Or, as individual researcher or staff specialist may be assisted on projects by other engineers or technicians.

Engineer VI

General characteristics. Has full technical responsibility for interpreting, organizing, executing, and coordinating assignments. Plans and develops engineering projects concerned with unique or controversial problems which have an important effect on major company programs. This involves exploration of subject area, definition of scope and selection of problems for investigation, and development of novel concepts and approaches. Maintains liaison with individuals and units within or outside the organization, with responsibility for acting independently on technical matters pertaining to own field. Work at this level usually requires extensive progressive experience including work comparable to engineer V.

Direction received. Supervision received is essentially administrative, with assignments given in terms of broad general objectives and limits.

Typical duties and responsibilities. One or more of the following: (1) In a supervisory capacity (a) plans, develops, coordinates, and directs a number of large and important projects or a project of major scope and importance, or (b) is responsible for the entire engineering program of a company when the program is of limited complexity and scope. Extent of responsibilities generally requires a few (3 to 5) subordinate supervisors or team leaders with at least one in a position comparable to level V. (2) As individual researcher or worker conceives, plans, and conducts research in problem areas of considerable scope and com-

plexity. The problems must be approached through a series of complete and conceptually related studies, are difficult to define, require unconventional or novel approaches, and require sophisticated research techniques. Available guides and precedents contain critical gaps, are only partially related to the problem, or may be largely lacking due to the novel character of the project. At this level, the individual researcher generally will have contributed inventions, new designs, or techniques which are of material significance in the solution of important problems. (3) As a staff specialist serves as the technical specialist for the organization (division or company) in the application of advanced theories, concepts, principles, and processes for an assigned area of responsibility (i.e., subject matter, function, type of facility or equipment, or product). Keeps abreast of new scientific methods and developments affecting the organization for the purpose of recommending changes in emphasis of programs or new programs warranted by such developments.

Responsibility for the direction of others. Plans, organizes, and supervises the work of a staff of engineers and technicians. Evaluates progress of the staff and results obtained, and recommends major changes to achieve overall objectives. Or, as individual researcher or staff specialist may be assisted on individual projects by other engineers or technicians.

Engineer VII

General characteristics. Makes decisions and recommendations that are recognized as authoritative and have an important impact on extensive engineering activities. Initiates and maintains extensive contacts with key engineers and officials of other organizations and companies, requiring skill in persuasion and negotiation of critical issues. At this level individuals will have demonstrated creativity, foresight, and mature engineering judgment in anticipating and solving unprecedented engineering problems, determining program objectives and requirements, organizing programs and projects and developing standards and guides for diverse engineering activities.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of the engineering program of a company with extensive and diversified engineering requirements, or (b) the entire engineering program of a company when it is more limited in scope. The overall engineering program contains critical problems the solution of which requires major technological advances and opens the way for extensive related development. Extent of responsibilities generally requires several subordinate organizational segments or teams. Recommends facilities, personnel, and funds required to carry out programs which are directly related with and directed toward fulfillment of overall company objectives. (2) As individual researcher and consultant is a recognized leader and authority in the company in a broad area of specialization or in a narrow but intensely specialized field. Selects research problems to further the company's objectives. Conceives and plans investigations of broad areas of considerable novelty and importance for which engineering precedents are lacking in areas critical to the overall engineering program. Is consulted extensively by associates and others, with a high degree of reliance placed on the incumbent's scientific interpretations and advice. Typically, will have contributed inventions, new designs, or techniques which are regarded as major advances in the field.

Responsibility for the direction of others. Directs several subordinate supervisors or team leaders, some of whom are in positions comparable to engineer VI; or, as individual researcher and consultant, may be assisted on individual projects by other engineers and technicians.

Engineer VIII

General characteristics. Makes decisions and recommendations that are recognized as authoritative and have a far-reaching impact on extensive engineering and related activities of the company. Negotiates critical and controversial issues with top level engineers and officers of other organizations and companies. Individuals at this level demonstrate a high degree of creativity, foresight, and mature judgment in planning, organizing, and guiding extensive engineering programs and activities of outstanding novelty and importance.

Direction received. Receives general administrative direction.

Typical duties and responsibilities. One or both of the following: (1) In a supervisory capacity is responsible for (a) an important segment of a very extensive and highly diversified engineering program of a company, or (b) the entire engineering program of a company when the program is of moderate scope. The programs are of such complexity and scope that they are of critical importance to overall objectives, include problems of extraordinary difficulty that often have resisted solution, and consist of several segments requiring subordinate supervisors. Is responsible for deciding the kind and extent of engineering and related programs needed to accomplish the objectives of the company, for choosing the scientific approaches, for planning and organizing facilities and programs, and for interpreting results. (2) As individual researcher and consultant formulates and guides the attack on problems of exceptional difficulty and marked importance to the company or industry. Problems are characterized by their lack of scientific prece-

dents and source material, or lack of success of prior research and analysis so that their solution would represent an advance of great significance and importance. Performs advisory and consulting work for the company as a recognized authority for broad program areas or in an intensely specialized area of considerable novelty and importance.

Responsibility for the direction of others. Supervises several subordinate supervisors or team leaders some of whose positions are comparable to engineer VII, or individual researchers some of whose positions are comparable to engineer VII and sometimes engineer VIII. As an individual researcher and consultant may be assisted on individual projects by other engineers or technicians.

NOTE: Individuals in charge of a company's engineering program may match any of several of the survey job levels depending on the size and complexity of engineering programs. Excluded from the definition are: (1) Engineers in charge of programs so extensive and complex (e.g., consisting of research and development on a variety of complex products or systems with numerous novel components) that one or more subordinate supervisory engineers are performing at level VIII; (2) individuals whose decisions have direct and substantial effect on setting policy for the organization (included, however, are supervisors deciding the "kind and extent of engineering and related programs" within broad guidelines set at higher levels); (3) individual researchers and consultants who are recognized as national and/or international authorities and scientific leaders in very broad areas of scientific interest and investigation.

Technical Support

ENGINEERING TECHNICIAN

To be covered by these definitions, employees must meet *all* of the following criteria: (1) Provides semiprofessional technical support for engineers working in such areas as research, design, development, testing, or manufacturing process improvement. (2) Work pertains to electrical, electronic, or mechanical components or equipment. (3) Required to have some knowledge of science or engineering. (*Excludes* production or maintenance workers, quality control testers, craft workers, drafters, designers, and engineers.)

Engineering Technician I

Performs simple routine tasks under close supervision or from detailed procedures. Work is checked in process or on completion. Performs, at this level, one or a combination of such typical duties as:

Assembles or installs equipment or parts requiring simple wiring, soldering, or connecting;

Performs simple or routine tasks or tests such as tensile or hardness tests; operates and adjusts simple test equipment; records test data;

Gathers and maintains specified records of engineering data such as tests, drawings, etc.; performs computations by substituting numbers in specified formulas; plots data and draws simple curves and graphs.

Engineering Technician II

Performs standardized or prescribed assignments involving a sequence of related operations. Follows standard work methods or explicit instructions; technical adequacy of routine work is reviewed on completion; nonroutine work may also be reviewed in process. Performs, at this level, one or a combination of such typical duties as:

Assembles or constructs simple or standard equipment or parts. May service or repair simple instruments or equipment;

Conducts a variety of standardized tests; may prepare test specimens; sets up and operates standard test equipment; records test data;

Extracts engineering data from various prescribed sources; processes the data following well-defined methods; presents the data in prescribed form.

Engineering Technician III

Performs assignments that are not completely standardized or prescribed. Selects or adapts standard procedures or equipment. Receives initial instructions, equipment requirements, and advice from supervisor or engineer; technical adequacy of completed work is checked. Performs, at this level, one or a combination of such typical duties as:

Constructs components, subunits, or simple models or adapts standard equipment. May troubleshoot and correct malfunctions;

Conducts various tests or experiments which may require minor modifications in test setups or procedures; selects, sets up, and operates standard test equipment and records test data;

Extracts and compiles a variety of engineering data; processes or computes data using specified formulas and procedures. Performs routine analysis to check applicability, accuracy, and reasonableness of data.

Engineering Technician IV

Performs nonroutine assignments of substantial variety and complexity. Receives objectives and technical advice

from supervisor or engineer; work is reviewed for technical adequacy. May be assisted by lower level technicians. Performs, at this level, one or a combination of such typical duties as:

Works on limited segment of development project; constructs experimental or prototype models to meet engineering requirements; conducts tests or experiments; records and evaluates data and reports findings;

Conducts tests or experiments requiring selection and adaptation or modification of test equipment and test procedures; records data; analyzes data and prepares test reports;

Compiles and computes a variety of engineering data; may analyze test and design data; develops or prepares schematics, designs, specifications, parts lists, or makes recommendations regarding these items. May review designs or specifications for adequacy.

Engineering Technician V

Performs nonroutine and complex assignments involving responsibility for planning and conducting a complete project of relatively limited scope or a portion of a larger and more diverse project. Selects and adapts plans, techniques, designs, or layouts. May coordinate portions of overall assignments; reviews, analyzes, and integrates the technical work of others. Supervisor or professional engineer outlines objectives, requirements, and design approaches; completed work is reviewed for technical adequacy and satisfaction of requirements. May be assisted by lower level technicians. Performs, at this level, one or a combination of such typical duties as:

Designs, develops, and constructs major units, devices, or equipment; conducts tests or experiments; analyzes results and redesigns or modifies equipment to improve performance; reports results;

Plans or assists in planning tests to evaluate equipment performance. Determines test requirements, equipment modification, and test procedures; conducts tests, analyzes and evaluates data, and prepares reports on findings and recommendations;

Reviews and analyzes a variety of engineering data to determine requirements to meet engineering objectives; may calculate design data; prepares layouts, detailed specifications, parts lists, estimates, procedures, etc. May check and analyze drawings or equipment to determine adequacy of drawings and design.

DRAFTERS

Drafter-tracer

Copies plans and drawings prepared by others by placing tracing cloth or paper over drawings and tracing with pen or pencil. (Does not include tracing limited to plans primarily consisting of straight lines and a large scale not requiring close delineation.)

AND/OR

Prepares simple or repetitive drawings of easily visualized items. Work is closely supervised during progress.

Drafter I

Prepares detail drawings of single units or parts for engineering, construction, manufacturing, or repair purposes. Types of drawings prepared include isometric projections (depicting three dimensions in accurate scale) and sectional views to clarify positioning of components and convey needed information. Consolidates details from a number of sources and adjusts or transposes scale as required. Suggested methods of approach, applicable precedents, and advice on source materials are given with initial assignments. Instructions are less complete when assignments recur. Work may be spot checked during progress.

Drafter II

Performs nonroutine and complex drafting assignments that require the application of most of the standardized drawing techniques regularly used. Duties typically involve such work as: Prepares working drawings of subassemblies with irregular shapes, multiple functions, and precise positional relationships between components; prepares architectural drawings for construction of a building including detail drawings of foundations, wall sections, floor plans, and roof. Uses accepted formulas and manuals in making necessary computations to determine quantities of materials to be used, load capacities, strengths, stresses, etc. Receives initial instructions, requirements, and advice from supervisor. Completed work is checked for technical adequacy.

Drafter III

Plans the graphic presentation of complex items having distinctive design features that differ significantly from established drafting precedents. Works in close support with the design originator, and may recommend minor design changes. Analyzes the effect of each change on the details of form, function, and positional relationships of components and parts. Works with a minimum of supervisory assistance. Completed work is reviewed by design originator for consistency with prior engineering determinations. May either prepare drawings, or direct their preparation by lower level drafters.

COMPUTER OPERATOR

Monitors and operates the control console of a digital computer, in accordance with operating instructions, to process data. Work is characterized by the following:

Studies operating instructions to determine equipment setup needed;

Loads equipment with required items (tapes, cards, paper, etc.);
Switches necessary auxiliary equipment into system;
Starts and operates computer;
Responds to operating instructions and computer output instructions;
Reviews error messages and makes corrections during operation *or* refers problems;
Maintains operating record.

May test-run new or modified programs and *assist* in modifying systems or programs. Included within the scope of this definition are fully qualified computer operators, trainees working to become fully qualified operators, and lead operators providing *technical* assistance to lower level operators.

Computer Operator I

Work assignments consist of on-the-job training (sometimes augmented by classroom training). Operator is provided detailed written or oral guidance before and during assignments and is under close personal supervision.

Computer Operator II

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing (i.e., one program is processed at a time). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

Computer Operator III

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments typically are established production runs (i.e., programs which present few operating problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers or aborts program.

OR

Work assignments are established production runs (i.e., programs which present few operating problems) executed by multiprocessing (i.e., simultaneous processing of two or more programs). In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedures.

Computer Operator IV

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by serial processing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

OR

Work assignments are characterized by the frequent introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems) executed by multiprocessing. In response to computer output instructions or error conditions, applies standard operating or corrective procedure. Refers problems which do not respond to preplanned procedure.

OR

Work assignments are established production runs, (i.e., programs which present few operating problems) executed by multiprocessing. Selects from a variety of standard setup and operating procedures. In response to computer output instructions or error conditions, deviates from standard procedures if standard procedures do not provide a solution. Then refers problems or aborts program.

Computer Operator V

Work assignments are characterized by the frequent testing and introduction of new programs, applications, and procedures (i.e., situations which require the operator to adapt to a variety of problems). In responding to computer output instructions and error conditions or to avoid loss of information or to conserve computer time, operator deviates from standard procedures or aborts program. Such actions may materially alter the computer unit's production plans. Advises programmers and subject-matter experts on setup techniques.

Computer Operator VI

In addition to level V characteristics, assignments at this level require a knowledge of program language, computer features, and software systems to *assist* in: (1) Maintaining, modifying, and developing operating systems or programs; (2) developing operating instructions and techniques to cover problem situations; (3) switching to emergency backup procedures.

CLERK, ACCOUNTING

Performs one or more accounting clerical tasks such as posting to registers and ledgers; reconciling bank accounts; verifying the internal consistency, completeness, and mathematical accuracy of accounting documents; assigning prescribed accounting distribution codes; examining and verifying for clerical accuracy various types of reports, lists, calculations, postings, etc.; or preparing simple (or assisting in preparing more complicated) journal vouchers. May work in either a manual or automated accounting system.

The work requires a knowledge of clerical methods and office practices and procedures which relates to the clerical processing and recording of transactions and accounting information. With experience, the worker typically becomes familiar with the bookkeeping and accounting terms and procedures used in the assigned work, but is not required to have a knowledge of the formal principles of bookkeeping and accounting.

Positions are classified into levels on the basis of the following definitions.

Clerk, Accounting I

Under close supervision, following detailed instructions and standardized procedures, performs one or more routine accounting clerical operations, such as posting to ledgers, cards, or worksheets where identification of items and locations of postings are clearly indicated; checking accuracy and completeness of standardized and repetitive records or accounting documents; and coding documents using a few prescribed accounting codes.

Clerk, Accounting II

Under general supervision, performs accounting clerical operations which require the application of experience and judgment, for example, clerically processing complicated or nonrepetitive accounting transactions, selecting among a substantial variety of prescribed accounting codes and classifications, or tracing transactions through previous accounting actions to determine source of discrepancies. May be assisted by one or more accounting clerks I.

CLERK, FILE

Files, classifies, and retrieves material in an established filing system. May perform clerical and manual tasks required to maintain files. Positions are classified into levels on the basis of the following definitions.

Clerk, File I

Performs routine filing of material that has already been classified or which is easily classified in a simple serial classification system (e.g., alphabetical, chronological, or numerical). As requested, locates readily available material in files and forwards material; may fill out withdrawal charge. May perform simple clerical and manual tasks required to maintain and service files.

Clerk, File II

Sorts, codes, and files unclassified material by simple (subject-matter) headings or partly classified material by finer subheadings. Prepares simple related index and cross-reference aids. As requested, locates clearly identified material in files and forwards material. May perform related clerical tasks required to maintain and service files.

Clerk, File III

Classifies and indexes file material such as correspondence, reports, technical documents, etc., in an established filing system containing a number of varied subject matter files. May also file this material. May keep records of various types in conjunction with the files. May lead a small group of lower level file clerks.

KEYPUNCH OPERATOR

Operates a keypunch machine to record or verify alphabetic and/or numeric data on tabulating cards or on tape.

Positions are classified into levels on the basis of the following definitions.

Keypunch Operator I

Work is routine and repetitive. Under close supervision or following specific procedures or instructions, works from various standardized source documents which have been coded, and follows specified procedures which have been prescribed in detail and require little or no selecting, coding, or interpreting of data to be recorded. Refers to supervisor problems arising from erroneous items, codes, or missing information.

Keypunch Operator II

Work requires the application of experience and judgment in selecting procedures to be followed and in search-

ing for, interpreting, selecting, or coding items to be keypunched from a variety of source documents. On occasion may also perform some routine keypunch work. May train inexperienced keypunch operators.

MESSENGER

Performs various routine duties such as running errands, operating minor office machines such as sealers or mailers, opening and distributing mail, and other minor clerical work. *Excluded* are positions that require operation of a motor vehicle as a significant duty.

SECRETARY

Assigned as a personal secretary, normally to one individual. Maintains a close and highly responsive relationship to the day-to-day activities of the supervisor. Works fairly independently, receiving a minimum of detailed supervision and guidance. Performs varied clerical and secretarial duties requiring a knowledge of office routine and understanding of the organization, programs, and procedures related to the work of the supervisor.

Exclusions. Not all positions that are titled "secretary" possess the above characteristics. *Examples* of positions which are excluded from the definition are as follows:

a. Positions which do not meet the "personal" secretary concept described above;
b. Stenographers not fully trained in secretarial-type duties;
c. Stenographers serving as office assistants to a group of professional, technical, or managerial persons;
d. Assistant-type positions which entail more difficult or more responsible technical, administrative, or supervisory duties which are not typical of secretarial work, e.g., administrative assistant, or executive assistant;
e. Positions which do not fit any of the situations listed in the section below titled "Level of Secretary's Supervisor," e.g., secretary to the president of a company that employes, in all, over 5,000 persons;
f. Trainees.

Secretary jobs which meet the required characteristics are matched at one of the five levels according to (a) the level of the secretary's supervisor within the company's organizational structure and (b) the level of the secretary's responsibility. Table C-4 indicates the level of the secretary for each combination of the factors.

Table C-4. Criteria for matching secretaries by level

Level of secretary's supervisor	Level of secretary's responsibility	
	LR-1	LR-2
LS-1	I	II
LS-2	II	III
LS-3	III	IV
LS-4	IV	V

Leval of Secretary's Supervisor (LS)

LS-1 a. Secretary to the supervisor or head of a small organizational unit (e.g., fewer than about 25 or 30 persons); or
b. Secretary to a nonsupervisory staff specialist, professional employee, administrative officer or assistant, skilled technician, or expert. (*NOTE:* Many companies assign stenographers, rather than secretaries as described above, to this level of supervisory or nonsupervisory worker.)

LS-2 a. Secretary to an executive or managerial person whose responsibility is not equivalent to one of the specific level situations in the definition for LS-3, but whose organizational unit normally numbers at least several dozen employees and is usually divided into organizational segments which are often, in turn, further subdivided. In some companies, this level includes a wide range of organizational echelons; in others, only one or two; or
b. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employes, in all, fewer than 5,000 persons.

LS-3 a. Secretary to a corporate officer (other than chairman of the board or president) of a company that employs, in all, over 100 but fewer than 5,000 persons; or
b. Secretary to the head (immediately below the officer level) of either a major corporatewide functional activity (e.g., marketing, research, operations, industrial relations, etc.) or a major geographic or organizational segment (e.g., a regional headquarters; a major division) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or
c. Secretary to the head of an individual plant, factory, etc., (or other equivalent level of official) that employs, in all, over 5,000 persons; or
d. Secretary to the head of a large and important organizational segment (e.g., a middle management supervisor of an organizational segment often involving as many as several hundred persons) of a company that employs, in all, over 25,000 persons.

LS-4 a. Secretary to the chairman of the board or president of a company that employs, in all, over 100 but fewer than 5,000 persons; or
b. Secretary to a corporate officer (other than the chairman of the board or president) of a company that employs, in all, over 5,000 but fewer than 25,000 persons; or
c. Secretary to the head, immediately below the corporate officer level, of a major segment or subsidiary of a company that employs, in all, over 25,000 persons.

NOTE: The term "corporate officer" used in the above *LS* definitions refers to those officials who have a significant corporatewide policymaking role with regard to major

company activities. The title "vice president," though normally indicative of this role, does not in all cases identify such positions. Vice presidents whose primary responsibility is to act personally on individual cases or transactions (e.g., approve or deny individual loan or credit actions; administer individual trust accounts; directly supervise a clerical staff) are not considered to be "corporate officers" for purposes of applying the definition.

Level of Secretary's Responsibility (LR)

This factor evaluates the nature of the work relationship between the secretary and the supervisor, and the extent to which the secretary is expected to exercise initiative and judgment. Secretaries should be matched at *LR-1* or *LR-2* described below according to their level of responsibility.

LR-1. Performs varied secretarial duties including or comparable to most of the following:

a. Answers telephone, greets personal callers, and opens incoming mail.
b. Answers telephone requests which have standard answers. May reply to requests by sending a form letter.
c. Reviews correspondence, memoranda, and reports prepared by others for the supervisor's signature to assure procedural and typographic accuracy.
d. Maintains supervisor's calendar and makes appointments as instructed.
e. Types, takes and transcribes dictation, and files.

LR-2. Performs duties under *LR-1* and, *in addition,* performs tasks requiring greater judgment, initiative, and knowledge of office functions including or comparable to most of the following:

a. Screens telephone and personal callers, determining which can be handled by the supervisor's subordinates or other offices.
b. Answers requests which require a detailed knowledge of office procedures or collection of information from files or other offices. *May* sign routine correspondence in own or supervisor's name.
c. Compiles or assists in compiling periodic reports on the basis of general instructions.
d. Schedules tentative appointments without prior clearance. Assembles necessary background material for scheduled meetings. Makes arrangements for meetings and conferences.
e. Explains supervisor's requirements to other employees in supervisor's unit. (Also types, takes dictation, and files.)

STENOGRAPHER

Primary duty is to take dictation using shorthand, and to transcribe the dictation. May also type from written copy. May operate from a stenographic pool. May occasionally transcribe from voice recordings.

NOTE: This job is distinguished from that of a secretary in that a secretary normally works in a confidential relationship with only one manager or executive and performs more responsible and discretionary tasks.

Stenographer, General

Dictation involves a normal routine vocabulary. May maintain files, keep simple records, or perform other relatively routine clerical tasks.

Stenographer, Senior

Dictation involves a varied technical or specialized vocabulary such as in legal briefs or reports on scientific research. May also set up and maintain files, keep records, etc.

OR

Performs stenographic duties requiring significantly greater independence and responsibility than stenographer, general, as evidenced by the following: Work requires a high degree of stenographic speed and accuracy; a thorough working knowledge of general business and office procedure and of the specific business operations, organizations, policies, procedures, files, workflow, etc. Uses this knowledge in performing stenographic duties and responsible clerical tasks such as maintaining follow-up files; assembling material for reports, memoranda, and letters; composing simple letters from general instructions; reading and routing incoming mail; answering routine questions, etc.

TYPIST

Uses a typewriter to make copies of various materials or to make out bills after calculations have been made by another person. May include typing of stencils, mats, or similar materials for use in duplicating processes. May do clerical work involving little special training, such as keeping simple records, filing records and reports, or sorting and distributing incoming mail.

Typist I

Performs *one or more of the following:* Copy typing from rough or clear drafts; or routine typing of forms, insurance policies, etc.; or setting up simple standard tabulations; or copying more complex tables already set up and spaced properly.

Typist II

Performs *one or more of the following:* Typing material in final form when it involves combining material from sev-

eral sources; or responsibility for correct spelling, syllabication, punctuation, etc., of technical or unusual words or foreign language material; or planning layout and typing of complicated statistical tables to maintain uniformity and balance in spacing. May type routine form letters, varying details to suit circumstances.

NOTE: The occupational titles and definitions for drafter-tracer, messenger, and stenographer are the same as those used in the Bureau's program of occupational wage surveys in metropolitan areas. The occupations listed below have the same definition in both the national and area surveys; however, the level designations differ as shown:

Occupation	National Survey of Professional, Administrative, Technical, and Clerical Pay	Occupational Wage Surveys in Metropolitan Areas
Drafter	I	C
	II	B
	III	A
Clerk, accounting	I	B
	II	A
Clerk, file	I	C
	II	B
	III	A
Keypunch operator	I	B
	II	A
Secretary[1]	I	E
	II	D
	III	C
	IV	B
	V	A
Typist	I	B
	II	A

[1] This 5-level definition for secretary will be used in the full area surveys beginning in calendar year 1977.

Appendix D. Comparison of Average Annual Salaries in Private Industry with Corresponding Salary Rates for Federal Employees Under the General Schedule

The survey was designed to provide a basis for comparing salaries under the General Schedule classification and pay system with salaries in private enterprise. To assure collection of pay data for work levels equivalent to the General Schedule grade levels, the Civil Service Commission,* in cooperation with the Bureau of Labor Statistics, prepared the occupational work level definitions used in the survey. Definitions were graded by the Commission according to standards established for each grade level. Table D-1 shows the surveyed jobs grouped by work levels equivalent to General Schedule grade levels.

Table D-1. Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule

Occupation and level surveyed by BLS[1]	Average annual salaries in private industry,[2] March 1977	Salary rates for Federal employees under the General Schedule, March 1977 and October 1977[3]										
		Grade[4]	Average[5] Mar. 1977	Annual rates and steps[6]								
				1	2	3	4	5	6	7	8	9	10
Clerks, file I	$6,068	GS 1	$5,917	$5,810	$6,004	$6,198	$6,392	$6,586	$6,780	$6,974	$7,168	$7,362	$7,556
Messengers	7,166			(6,219)	(6,426)	(6,633)	(6,840)	(7,047)	(7,254)	(7,461)	(7,668)	(7,875)	(8,082)
Clerks, file II	7,168	GS 2	6,775	6,572	6,791	7,010	7,229	7,448	7,667	7,886	8,105	8,324	8,543
Keypunch operators I	8,045			(7,035)	(7,270)	(7,505)	(7,740)	(7,975)	(8,210)	(8,445)	(8,680)	(8,915)	(9,150)
Typists I	7,202												
Clerks, accounting I	8,138	GS 3	7,955	7,408	7,655	7,902	8,149	8,396	8,643	8,890	9,137	9,384	9,631
Clerks, file III	9,082			(7,930)	(8,194)	(8,458)	(8,722)	(8,986)	(9,250)	(9,514)	(9,778)	(10,042)	(10,306)
Drafter-tracers	9,214												
Engineering technicians I	9,727												
Keypunch operators II	9,337												
Stenographers, general	9,086												
Typists II	8,585												
Clerks, accounting II	10,388	GS 4	9,259	8,316	8,593	8,870	9,147	9,424	9,701	9,978	10,255	10,532	10,809
Computer operators I	7,979			(8,902)	(9,199)	(9,496)	(9,793)	(10,090)	(10,387)	(10,684)	(10,981)	(11,278)	(11,575)
Drafters I	10,354												
Engineering technicians II	11,355												
Secretaries I	9,329												
Stenographers, senior	10,178												
Accountants I	12,155	GS 5	10,567	9,303	9,613	9,923	10,233	10,543	10,853	11,163	11,473	11,783	12,093
Auditors I	12,570			(9,959)	(10,291)	(10,623)	(10,955)	(11,287)	(11,619)	(11,951)	(12,283)	(12,615)	(12,947)
Buyers I	12,346												
Chemists I	12,872												
Computer operators II	9,463												
Drafters II	12,833												
Engineers I	14,613												
Engineering technicians III	13,151												
Secretaries II	10,100												
Computer operators III	10,529	GS 6	11,928	10,370	10,716	11,062	11,408	11,754	12,100	12,446	12,792	13,138	13,484
Secretaries III	11,159			(11,101)	(11,471)	(11,841)	(12,211)	(12,581)	(12,951)	(13,321)	(13,691)	(14,061)	(14,431)

See footnotes at end of table.

Table D-1. Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule – Continued

Occupation and level surveyed by BLS[1]	Average annual salaries in private industry,[2] March 1977	Salary rates for Federal employees under the General Schedule, March 1977 and October 1977[3]										
		Grade[4]	Average[5] Mar. 1977	Annual rates and steps[6]								
				1	2	3	4	5	6	7	8	9	10
Accountants II	$14,624	GS 7	$12,993	$11,523	$11,907	$12,291	$12,675	$13,059	$13,443	$13,827	$14,211	$14,595	$14,979
Auditors II	14,503			(12,336)	(12,747)	(13,158)	(13,569)	(13,980)	(14,391)	(14,802)	(15,213)	(15,624)	(16,035)
Buyers II	15,099												
Chemists II	14,439												
Computer operators IV	12,557												
Drafters III	15,828												
Engineers II	16,221												
Engineering technicians IV	15,221												
Job analysts II	13,572												
Secretaries IV	12,138												
Computer operators V	14,099	GS 8	14,812	12,763	13,188	13,613	14,038	14,463	14,888	15,313	15,738	16,163	16,588
Secretaries V	13,407			(13,662)	(14,117)	(14,572)	(15,027)	(15,482)	(15,937)	(16,392)	(16,847)	(17,302)	(17,757)
Accountants III	16,545	GS 9	15,761	14,097	14,567	15,037	15,507	15,977	16,447	16,917	17,387	17,857	18,327
Attorneys I	16,033			(15,090)	(15,593)	(16,096)	(16,599)	(17,102)	(17,605)	(18,108)	(18,611)	(19,114)	(19,617)
Auditors III	17,108												
Buyers III	18,021												
Chemists III	17,600												
Computer operators VI	16,423												
Engineers III	18,696												
Engineering technicians V	17,237												
Job analysts III	17,016												
Accountants IV	$20,367	GS 11	$19,205	$17,056	$17,625	$18,194	$18,763	$19,332	$19,901	$20,470	$21,039	$21,608	$22,177
Attorneys II	19,938			(18,258)	(18,867)	(19,476)	(20,085)	(20,694)	(21,303)	(21,912)	(22,521)	(23,130)	(23,739)
Auditors IV	21,526												
Buyers IV	21,907												
Chemists IV	21,674												
Chief accountants I	22,558												
Directors of personnel I	19,062												
Engineers IV	22,072												
Job analysts IV	20,908												
Accountants V	25,042	GS 12	23,088	20,442	21,123	21,804	22,485	23,166	23,847	24,528	25,209	25,890	26,571
Attorneys III	25,460			(21,883)	(22,612)	(23,341)	(24,070)	(24,799)	(25,528)	26,257	(26,986)	(27,715)	(28,444)
Chemists V	26,214												
Chief accountants II	25,320												
Director of personnel II	23,755												
Engineers V	25,620												

See footnotes at end of table.

Table D-1. Comparison of average annual salaries in private industry with salary rates for Federal employees under the General Schedule — Continued

Occupation and level surveyed by BLS[1]	Average annual salaries in private industry,[2] March 1977	Salary rates for Federal employees under the General Schedule, March 1977 and October 1977[3]										
		Grade[4]	Average[5] Mar. 1977	Annual rates and steps[6]								
				1	2	3	4	5	6	7	8	9	10
Attorneys IV	$30,973	GS 13	$27,717	$24,308	$25,118	$25,928	$26,738	$27,548	$28,358	$29,168	$29,978	$30,788	$31,598
Chemists VI	30,526			(26,022)	(26,889)	(27,756)	(28,623)	(29,490)	(30,357)	(31,224)	(32,091)	(32,958)	(33,825)
Chief accountants III	31,324												
Directors of personnel III	29,188												
Engineers VI	29,376												
Attorneys V	38,828	GS 14	32,677	28,725	29,683	30,641	31,599	32,557	33,515	34,473	35,431	36,389	37,347
Chemists VII	36,329			(30,750)	(31,775)	(32,800)	(33,825)	(34,850)	(35,875)	(36,900)	(37,925)	(38,950)	(39,975)
Chief accountants IV	36,789												
Directors of personnel IV	37,785												
Engineers VII	32,999												
Attorneys VI	46,509	GS 15	38,956	33,789	34,915	36,041	37,167	38,293	39,419	40,545	41,671	42,797	43,923
Chemists VIII	44,642			(36,171)	(37,377)	(38,583)	(39,789)	(40,995)	42,201	(43,407)	(44,613)	(45,819)	(47,025)
Engineers VIII	38,063												

[1] For definitions, see appendix C.

[2] Survey findings, as summarized in table 1 of this bulletin. For scope of survey, see appendix A.

[3] The General Schedule rates that were in effect in March 1977, the reference data of the BLS PATC survey, are shown on the first line for each grade. The new rates, as adjusted in October 1977, are shown in parentheses.

[4] Corresponding grades in the General Schedule were supplied by the U.S. Civil Service Commission.

[5] Mean salary of all General Schedule employees in each grade as of March 31, 1977. Not limited to Federal employees in occupations surveyed by BLS.

[6] Section 5335 of title 5 of the U.S. Code provides for within-grade increases on condition that the employee's work is of an acceptable level of competence as defined by the head of the agency. For employees who meet this condition, the service requirements are 52 calendar weeks each for advancement to salary rates 2, 3, and 4; 104 weeks each for advancement to salary rates 5, 6, and 7; and 156 weeks each for advancement to salary rates 8, 9, and 10. Section 5336 provides that an additional within-grade increase may be granted within any period of 52 weeks in recognition of high quality performance above that ordinarily found in the type of position concerned.

Under Section 5303 of title 5 of the United States Code, higher minimum rates (but not exceeding the maximum salary rate prescribed in the General Schedule for the grade or level) and a corresponding new salary range may be established for positions or occupations under certain conditions. The conditions include a finding that the Government's recruitment or retention of well-qualified persons is significantly handicapped because the salary rates in private industry are substantially above the salary rates of the statutory pay schedules. As of March 1977, special, higher salary ranges were authorized for professional engineers, accountants, and auditors at the entry grades (GS-5 and GS-7). Information on special salary rates, including the occupations and the areas to which they apply, may be obtained from the U.S. Civil Service Commission, Washington, D.C. 20415, or its regional offices.

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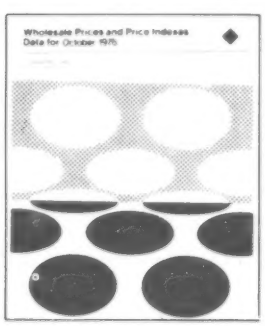

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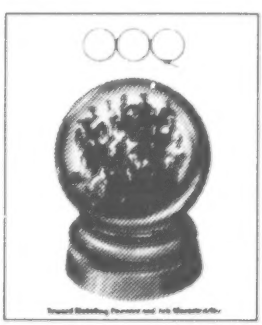

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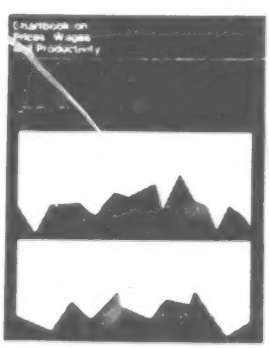

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